



# HEALTHY CHILDREN

S. JOSEPHINE BAKER



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# HEALTHY CHILDREN

A Volume  
Devoted to the Health  
of the Growing Child.

BY

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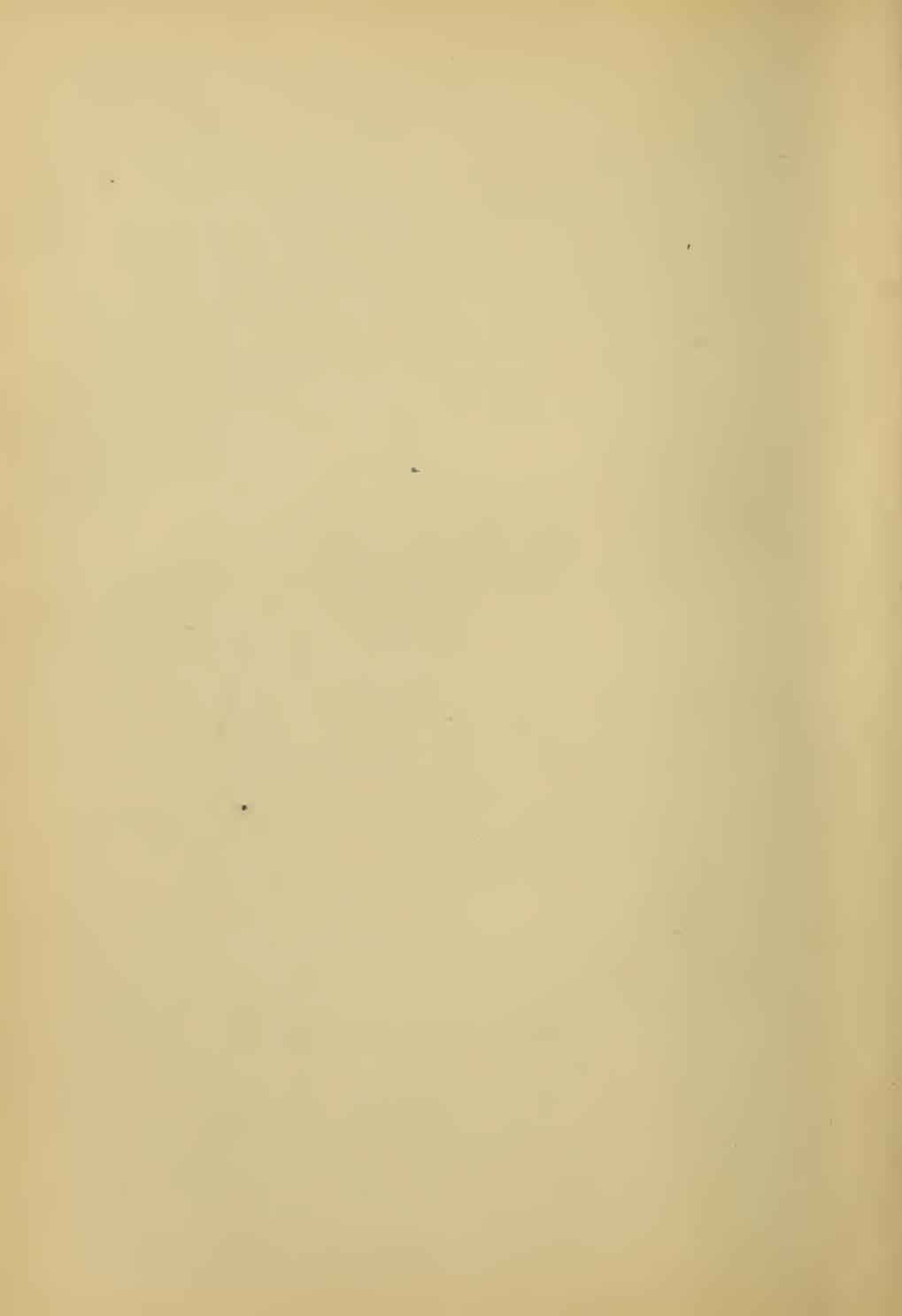
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TO  
MY FATHER  
AND  
MY MOTHER  
THIS BOOK ON  
HEALTHY CHILDREN  
IS LOVINGLY AND  
GRATEFULLY  
DEDICATED





## PREFACE

For many years the health of the baby and the health of the child of school age have received attention from the public health authorities, and particularly in our large cities there have been many opportunities for individual instruction of mothers in the care of little babies or older children. It is only recently, however, that the health of the child between two and six years has received any attention. This period of life has come to be known as the "preschool age." It is the time when the child is past babyhood, yet is not old enough to enter school.

This book deals with the health problems of the preschool age child, but because during this age period the child is particularly susceptible to many of the contagious diseases and to many of the more common infectious diseases, a large part of the book has been given up to a discussion of methods of controlling these diseases and caring for them at home. This consideration of illness, however, should not be allowed to outweigh the realization of the importance of prevention of disease and methods whereby children may be kept well. It is the purpose of the book to *accentuate health, not disease*, and to show the mother how she may give the child of preschool age

the same health care that is now so freely available for the baby. It cannot be too strongly emphasized that this book is not intended to convey information which can be used in place of the expert care of a physician. In every case of illness a doctor should be summoned at the earliest possible moment and his advice and directions followed in detail. In order, however, to explain how health may be maintained, it is necessary for the mother to know something of the early symptoms of the common diseases, how they may be prevented, and the care that will shorten their course and give the doctor the most intelligent type of aid.

As aids to child training and to lay the foundation for *education*, we have had a marked contribution made to the period of preschool life by Froebel, who gave us the idea of the kindergarten, and by Montessori, who has made practical many unique and valuable ideas in the training of the young child. In health matters, the child from two to six has received little, if any, attention and it is hoped that this book will help mothers to understand the importance of this period of life and give them the information to make healthy childhood continuous with healthy babyhood.

As far as possible, technical terms have been avoided, but occasionally it has been necessary to use them. A glossary will be found in the back of the book, containing explanations of the less understandable terms or words. Because health is affected by so many factors, it has been found necessary to repeat certain details under various headings. In studying any particular subject, every reference to it should be read so that there may be more complete understanding. There is nothing difficult, nor need unusual methods be applied, in order to keep children well. Any effort, however slight, that is applied in that direction, will inevitably result in a finer and better developed race.

S. JOSEPHINE BAKER.



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# HEALTHY CHILDREN

## CHAPTER I

### PHYSICAL AND MENTAL DEVELOPMENT

The entire period of childhood is one of growth. There should be a normal, even development of the child's mentality and an equally regular development of the organs of the body, the bones and the muscles.

During the first year of life the needs of the baby are mainly physical. As the child grows older, its life becomes much more complex and its mental as well as its physical needs demand attention. The period under five years of age is one of very rapid growth. There is probably no other time in the life history of the individual when both body and mind are so responsive to environment and impressions, and when so much can be done to build up good health as during the preschool age. During this time the child is both mentally and physically extremely sensitive to its surroundings. It is keenly receptive to all impressions and suggestions. Everything that concerns its daily life leaves some impression, therefore it is of the utmost importance that during this time the child's surroundings, associates and

training tend toward normal mental and physical development.

While the needs of the child during this period may seem, and are to a great extent, rather diverse, it is a satisfaction to know that there is nothing that pertains to proper development of child life that is not within the reach of every family. It is particularly important during the preschool age that the child should live in decent and clean surroundings, with as much fresh air as possible throughout the twenty-four hours. It is essential that the food be of the proper kind, and given at regular intervals, and that the clothing be suitable. The regular practice of personal hygiene is more important than at any other time of life, except during babyhood. Included in this is the care of all the organs and functions of the body. Sleep, rest, recreation, proper bathing and hygiene of the eyes, ears, nose, throat and excretory organs, such as the skin, kidneys and bowels, are of importance. Not only are such surroundings and personal hygiene of the first importance at this time because of their immediate effect upon the child, but this is the period of life when health habits can be formed which will last as long as the child lives and which make all the difference in after life between poor

health or semi-invalidism and good health, and a life that is a satisfaction and a joy.

### *Increase in Height and Weight*



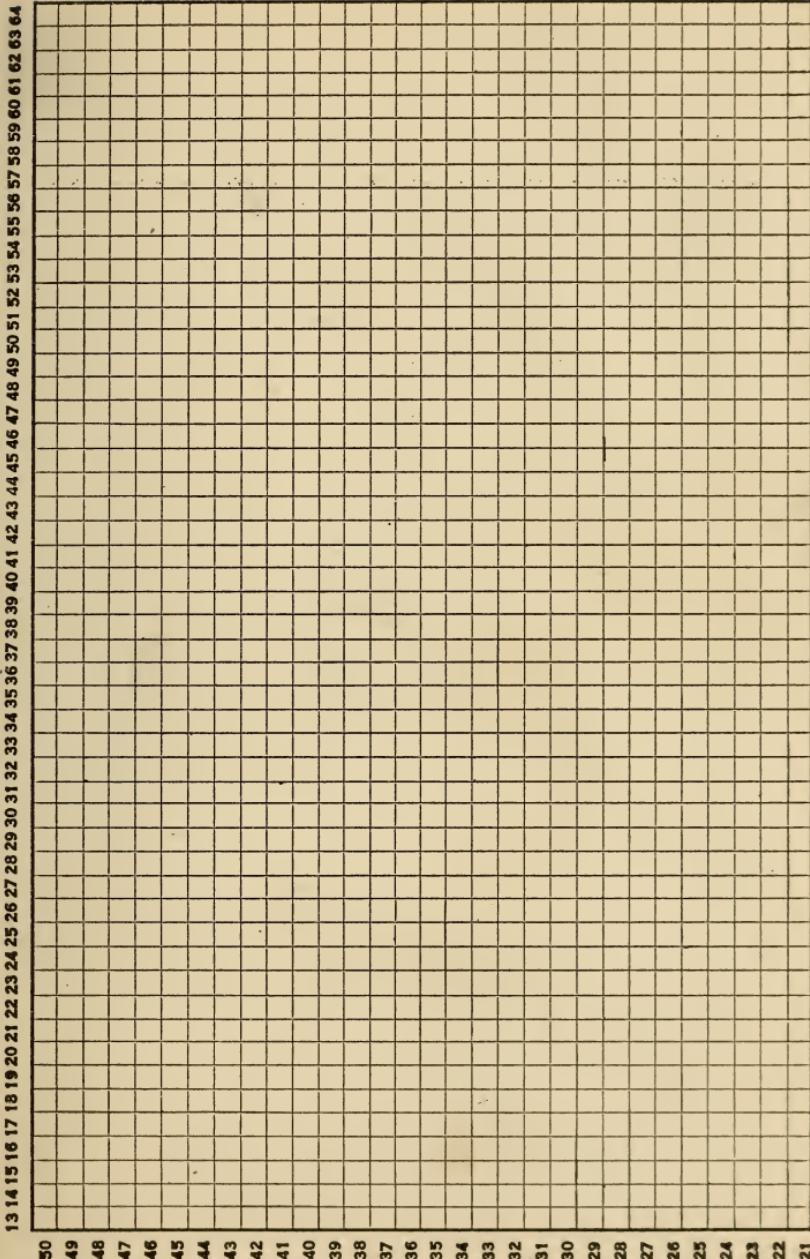
The best method we have of determining normal physical development is regular increase in height and weight. These bear a definite relation to each other. The child who shows a normal balance between its height and weight, and an increase in both these points in proper ratio, is a normally developed child, and, in the majority of instances, its nutrition is good. Some children, however, grow very rapidly as far as height is concerned but do not make a corresponding gain in weight. When a child weighs less than it should for its height, it is almost always an indication that there is something seriously wrong with its nutrition. The health of the child depends upon its proper nutrition. Nutrition, as we shall see later, is the result of proper hygienic surroundings and the right kind of food, which is properly digested and used by the body in promoting normal growth. It is important, therefore, to know in every stage of the child's development whether or not it is well nourished. The simplest and easiest way for the mother to determine this is in the relation between height and weight of the child at a given age. There are many

other symptoms of undernourishment, which will be discussed later. The particular one which has to do with growth is the most important.

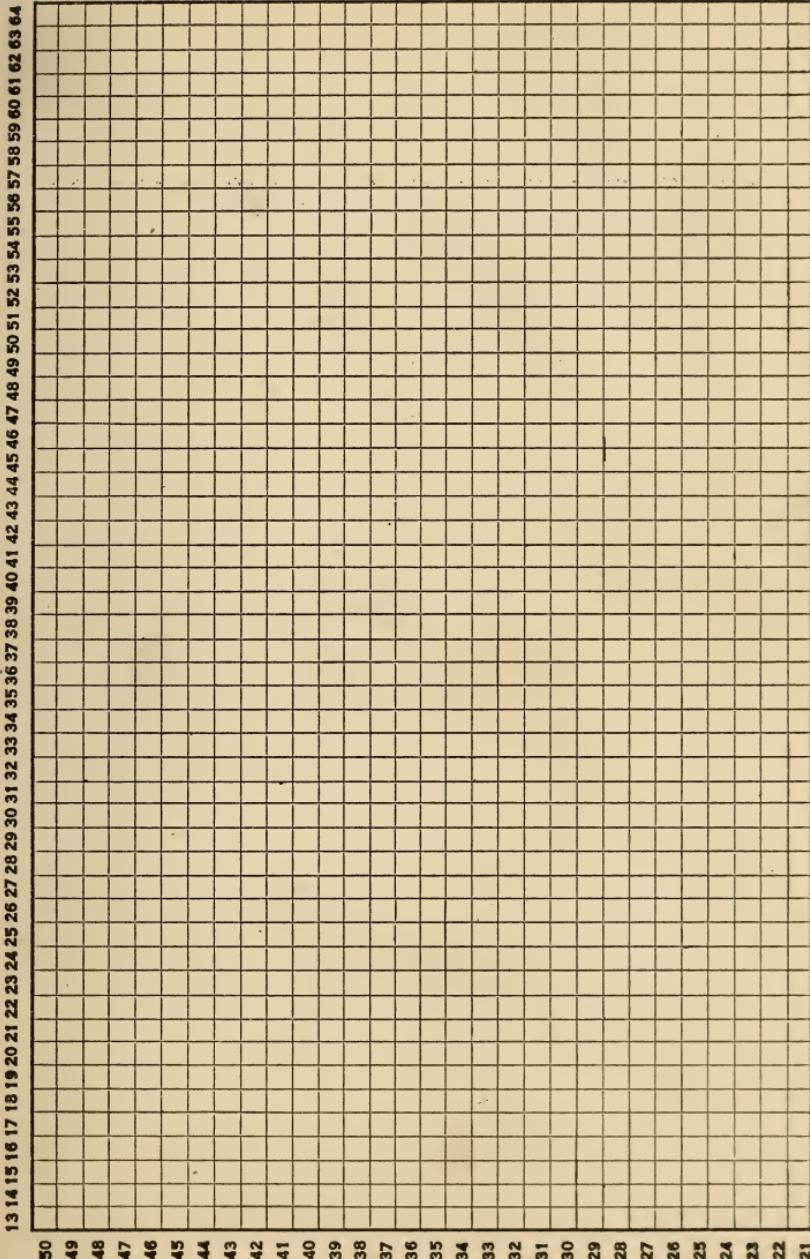
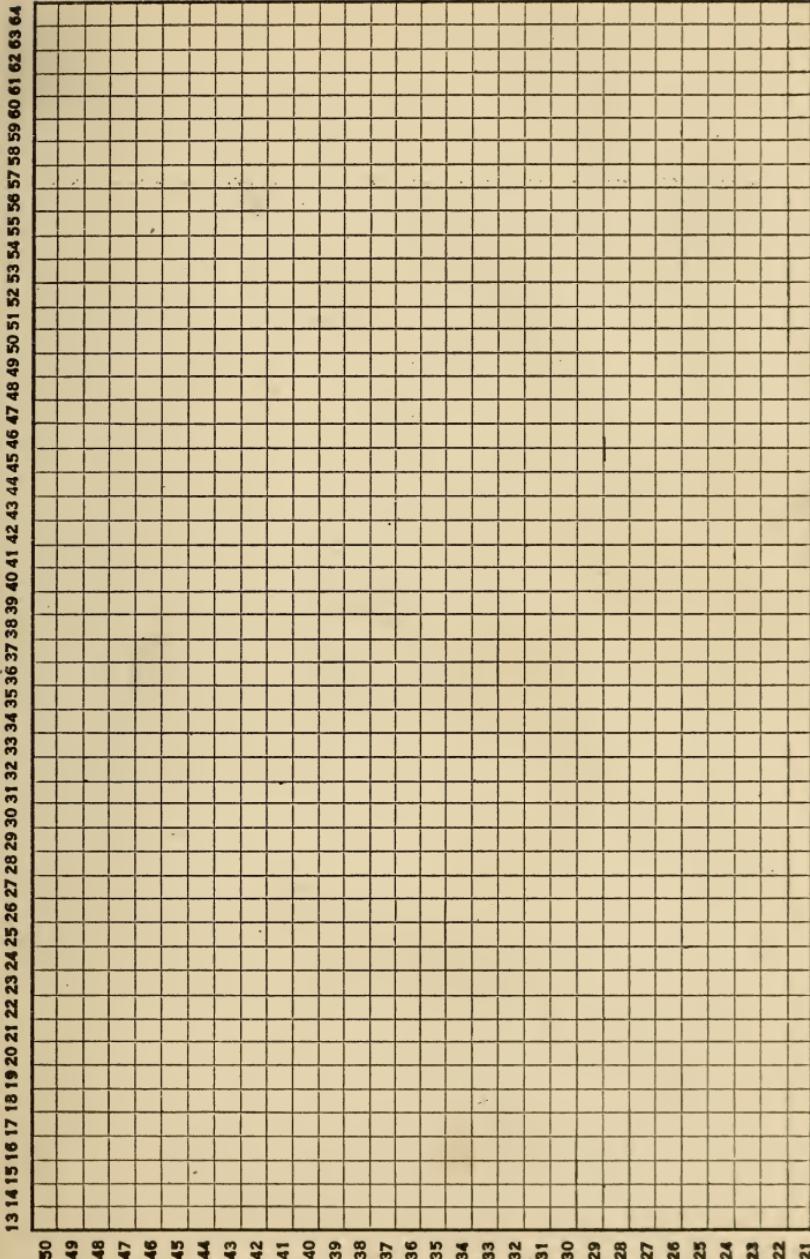
In giving tables of heights and weights, it must be remembered that the *average* child is being considered. All tables of this kind are made up from the results of examinations of large numbers of children of various nationalities, living under conditions of both city and rural life. It is perfectly possible that a well nourished child may differ to some extent from the standard given as the average for a child of its age. It is safe to say, however, that this difference will not amount to more than ten per cent in either direction, therefore a child need not be considered undernourished or lacking in proper development unless it is at least ten per cent below the average weight in relation to its height and age.

Children should have their height measured each six months and should be weighed once a month. It is wise to keep a chart of the child's weight. Such a chart may be made like the one illustrated on the next page. On this should be placed, in the appropriate column, a dot showing the child's weight on a given date. When the child is weighed the following month a dot should be placed in the next column and a line drawn between the two

AGE IN MONTHS



WEIGHT IN POUNDS



AVERAGE HEIGHTS AND WEIGHTS OF WHITE CHILDREN, BOYS AND GIRLS, UNDER SIX YEARS OF AGE, BY MONTHS, AS FOUND IN NEW YORK CITY.

Age	BOYS		GIRLS	
	Average Height Inches	Average Weight Pounds	Average Height Inches	Average Weight Pounds
Under 1 month.	21 7/8	8 7/8	20 3/4	8 1/4
1 month.....	22	10	21 1/2	9 1/2
2 months.....	23 1/8	11 3/4	22 5/8	11
3 " .....	24	13 1/4	23 5/8	12 3/8
4 " .....	24 1/8	14 5/8	24 1/2	13 7/8
5 " .....	25 5/8	15 7/8	24 7/8	14 5/8
6 " .....	26 1/4	16 3/4	25 1/2	15 5/8
7 " .....	26 7/8	17 3/4	26 3/8	16 7/8
8 " .....	27 3/8	18 3/4	26 3/4	17 3/8
9 " .....	27 3/4	19 1/8	27	17 7/8
10 " .....	28 1/8	19 5/8	27 3/4	18 1/2
11 " .....	28 3/8	20 1/4	27 7/8	19 1/8
12 " .....	28 3/4	20 5/8	28 1/4	19 1/2
13 " .....	29 1/4	21 3/8	28 3/4	20
14 " .....	29 1/2	21 3/4	29 1/8	20 1/4
15 " .....	30 1/8	22 5/8	29 1/2	21 1/2
16 " .....	30 3/8	22 7/8	29 3/4	21 3/4
17 " .....	30 1/2	23 1/4	30 3/8	22 1/8
18 " .....	31 1/8	23 7/8	30 5/8	22 1/2
19 " .....	31 5/8	24 1/4	31	23
20 " .....	31 3/4	24 1/2	31 3/8	23 1/2
21 " .....	31 7/8	25 1/4	31 7/8	24 1/8
22 " .....	32 5/8	25 7/8	32	24 3/8
23 " .....	32 7/8	26	32 1/8	24 5/8
24 " .....	33 1/8	26 5/8	32 5/8	25 1/4

Age	BOYS		GIRLS	
	Average Height Inches	Average Weight Pounds	Average Height Inches	Average Weight Pounds
25 months . . . . .	33 1/4	26 3/4	32 7/8	25 1/2
26 " " . . . . .	33 3/4	27	33 1/8	25 3/4
27 " " . . . . .	34 1/8	28	33 3/8	26 3/8
28 " " . . . . .	34 1/4	28 1/4	33 5/8	26 1/2
29 " " . . . . .	34 3/8	28 1/2	33 3/4	26 5/8
30 " " . . . . .	34 1/2	28 5/8	34	26 7/8
31 " " . . . . .	34 3/4	28 3/4	34 5/8	28 1/8
32 " " . . . . .	35 1/4	29 3/4	34 7/8	28 5/8
33 " " . . . . .	35 5/8	30	35 1/8	28 3/4
34 " " . . . . .	35 3/4	30 1/4	35 3/8	29
35 " " . . . . .	35 7/8	30 1/2	35 5/8	29 1/2
36 " " . . . . .	36 1/8	30 5/8	35 3/4	29 3/8
37 " " . . . . .	36 3/8	30 3/4	35 7/8	30 1/4
38 " " . . . . .	36 5/8	31 1/4	36 1/8	30 1/4
39 " " . . . . .	36 3/4	31 1/2	36 1/4	30 3/8
40 " " . . . . .	37	31 8/4	36 3/8	30 3/4
41 " " . . . . .	37 1/8	31 3/4	36 5/8	30 7/8
42 " " . . . . .	37 5/8	32 3/4	37 1/8	31 1/2
43 " " . . . . .	37 7/8	33 1/2	37 1/2	32
44 " " . . . . .	38 1/8	33 3/4	37 3/4	32 1/8
45 " " . . . . .	38 3/8	34	38	32 1/8
46 " " . . . . .	38 1/4	34	38	32 1/4
47 " " . . . . .	38 1/2	34 1/4	38 1/4	32 1/2
48 " " . . . . .	38 7/8	34 1/2	38 1/4	32 7/8
49 " " . . . . .	39	35 1/4	38 1/2	33 1/8
50 " " . . . . .	39 1/4	35 1/4	39 1/8	34
51 " " . . . . .	39 1/2	35 1/2	39 1/4	34 1/8
52 " " . . . . .	39 5/8	35 1/2	39 3/8	34 1/4

Age	BOYS		GIRLS	
	Average Height Inches	Average Weight Pounds	Average Height Inches	Average Weight Pounds
53 months . . . . .	39 3/4	35 5/8	39 1/2	34 1/2
54 " . . . . .	39 3/4	35 3/4	39 1/2	34 5/8
55 " . . . . .	40 1/2	36 7/8	39 7/8	34 7/8
56 " . . . . .	40 5/8	37 1/2	40	35 1/8
57 " . . . . .	40 3/4	38 1/8	40 3/8	36 3/8
58 " . . . . .	40 3/4	38 1/8	40 1/2	36 5/8
59 " . . . . .	40 7/8	38 1/4	40 5/8	36 3/4
60 " . . . . .	41	38 3/8	40 3/4	36 3/4
61 " . . . . .	41 1/8	38 1/2	40 7/8	36 7/8
62 " . . . . .	41 3/8	38 7/8	41	37
63 " . . . . .	41 5/8	38 7/8	41 1/8	37 1/8
64 " . . . . .	41 5/8	39	41 3/8	37 1/4
65 " . . . . .	41 5/8	39 1/4	41 1/2	37 1/2
66 " . . . . .	42 1/4	39 1/2	42	38 1/4
67 " . . . . .	42 1/4	39 5/8	42	39 1/8
68 " . . . . .	42 1/2	40	42 3/8	39 3/8
69 " . . . . .	42 3/4	40 7/8	42 1/2	39 5/8
70 " . . . . .	43 1/4	41 1/2	42 1/2	40 1/4

dots. A comparison can then be made with the tables shown on pages 6, 7 and 8 showing the height and weight of average children. As the weighing progresses, it may be seen at a glance whether there is a regular increase in weight. The weight at any one particular time is not the most important point to notice. It is essential, however, that there should be a regular and definite gain, and if the weight is stationary for more than two months, or if a loss in weight is shown at any time, immediate attention should be paid to readjustment of the child's life to more nearly meet its needs. It will be noted that the increase in height and weight is not so rapid after the first year. An easy way to remember the right weight for a given age is that the average gain amounts to about five pounds a year from the first to the eleventh years. After that a child will gain an average of ten pounds a year until the time for growth is over.

The gain in height is not so regular. At the end of the first year the baby should measure about twenty-eight inches. Each year thereafter, until the fifth, there should be an average gain of four inches in height. From the fifth to the tenth years the gain varies from two to three inches. The table will show this increase more in detail.



*DEVELOPMENT OF SPECIAL SENSES*

While the term "growth" commonly refers to increase in size, the development of the child includes its increase in mental power, and increased activity and keenness of the various functions. Some children show an abnormally rapid development. There are many instances of so-called "infant prodigies" where children learn to read and write and even to grasp difficult mental problems at an extraordinarily early age. Such children are the exception, however, not the rule. Unless the child shows unusual mental capacity and the parents are able to control its development with the utmost wisdom, it is better to consider the period from one to five years of age a time when the foundation is laid for good health and good mental development, rather than a time when the child is forced into activity which will interfere with its opportunity for play, recreation, amusement and for the normal training and development which are the right of every child. There is no absolute rule to show the exact progress and development of the special senses in children from one to five years of age. Because of the great variation, we can speak of the subject only in a general way.

*Speech*

Ordinarily, at the end of one year, the baby has learned to say a few words, and by the time it is eighteen months old these words may be put together into short sentences. The little child, as soon as it learns to talk, almost always uses its first words to ask questions. The curiosity of young children is insatiable. This is not a senseless curiosity, but a perfectly normal one, and speech offers the child an opportunity to satisfy its thirst for knowledge. Speech is used also as a means of expressing the child's own ideas, and the constant use of speech for these two purposes tends to develop it as a mode of expression much more rapidly than is the case in the development of the other senses.

It is necessary to urge some children to talk; others talk incessantly, without urging. The child who must be urged to talk may be simply indifferent, but there is always the possibility of a mental defect when speech has been markedly retarded or is completely absent when the child is two years of age. Under such circumstances, only a thorough physical and mental examination will determine whether or not the child is simply backward or indifferent, or whether there is some physical defect which interferes with speech, or, possibly, some

mental defect. In a large number of instances where mental defect is the cause of inability to speak, there is a corresponding deafness, and the child's inattention and apparent inability to hear may often be the first signs noted. Careful attention should be paid to this matter, because if deafness is present in addition to inability to speak, deafmutism should receive early attention at the hands of a specialist.

### *Stuttering or Stammering*

Stuttering, stammering or distorted speech may be the result of some physical defect or a marked nervous condition, or it may be the result of habit. Occasionally, a child's tongue will be bound down to the floor of the mouth by a tiny fold of mucous membrane, and this inability to move the tongue freely leads to distorted speech and difficulty in pronouncing certain words. Such children have a tendency to lisp. Letters like "s" cannot be pronounced clearly, and there is a blurring over of many word sounds. The treatment is simple. Any physician can make a small cut in the mucous membrane, releasing the tongue so that it is freely movable. The operation is not at all dangerous.

Stuttering and stammering sometimes start as a purely nervous habit, because the child has been unduly urged to talk or is of an

extremely nervous disposition. As soon as an effort is made to say anything, there is loss of speech control, usually the result of some emotional disturbance. Stammering or stuttering increases the more the child tries to express itself. A great deal may be done in early life to correct this condition by teaching the child to speak slowly and to accent distinctly every syllable of a word. Every effort should be made to overcome the emotional excitement and the nervousness. Such children should never be forced into new experiences that may be mentally disturbing. They should be brought into contact with other children for normal play, but great tact must be used in handling them at all times. Particular care should be taken to see that no one makes fun of their infirmity. In a great number of cases constant attention to slow speech and calming all nervousness will cure stammering and stammering. However, if the habit becomes established and continues until the child is five years old, it is probable that special treatment will be necessary, and this can be carried on only by someone who has made a special study of the subject.

#### *Touch, Taste, Hearing, Smell*

All of these functions develop first in babyhood, but are not keen until the child is past

eighteen months of age. Up to that time they have a very limited relation to the child's life, but after the baby passes the age of eighteen months, if it is normally developed, it begins to make conscious effort to use these special senses in order to widen its understanding of its environment.

The function of touch in young children is peculiarly acute. Madame Montessori has taken advantage of this idea in her method of training children, and it has been found possible to develop this sense in very young children to a remarkable and hitherto unthought-of degree. Up to the time a child is five years of age, it is possible to cultivate the delicate sense of touch so that it may become an important aid throughout life. It is easily blunted, if neglected. The child should be encouraged to tell the shape of various articles by feeling them rather than by looking at them, to tell the texture of materials by the sense of touch, to distinguish between soft and hard substances or between smooth and rough materials, to determine the texture of plants, trees and growing things, as well as the texture and character of all familiar, material surroundings. This opens up a wonderful method of training children to be observant, interested and of delicate comprehension. Children who have their sense of touch developed to this

extent have acquired something that will add immeasurably to their future pleasure in life.

Taste and smell are not acutely developed during early child life. Children have marked prejudices with regard to certain articles of food, and these prejudices frequently relate to taste. Thus milk, which may be very much disliked as a drink, will often be taken when prepared in the form of soups, custards or ice cream. Eggs, when distasteful if eaten alone, will be eaten if disguised as part of some pudding or custard. On the whole, however, the sense of taste is not particularly keen and children will put into their mouths things which would be considered distasteful to an adult with a normally developed sense of taste. Little children do not mind eating mud, clay or even more repulsive things. Fine taste is largely the result of cultivation in later years.

The sense of smell in young children is not well developed. They rarely are sensitive to disagreeable odors or appreciative of delightful ones. If the sense of smell is totally lacking, that is, if the child is unable to distinguish that the rose has perfume or that anything is distinctly repulsive or has a bad smell, it is probable that there is some marked nasal catarrh or nasal occlusion, due to adenoid growths.

*Sight*

Early development of sight has mainly to do with distinction between light and darkness, recognition of people who are well known, such as father, mother or nurse, or distinguishing bright colored objects. Red is probably the first color that is noticed by the baby, and bright colors have an unusual attraction throughout childhood. It is not until the baby is about two years old that it begins to appreciate objects in their proper relation to each other.

*Muscular Development*

The condition of the child's muscles is largely dependent upon its nutrition. Muscular tissue develops more rapidly when it is used, and the constant restless activity of the normal child usually results in firm, hard and adequate muscles. Children who are not well nourished suffer from extreme bodily fatigue and their muscles are apt to be flabby and soft, but in a child who is living under the right conditions and who is well nourished, the muscular tissue can be felt all over the body, well rounded and firm, and the child will be active without fatigue.

During the first two or three years of life there is little conscious control of the muscular

development. Learning to walk is probably the first expression of conscious muscular control and after the child finds that it can control the movement of its legs and feet, it begins, usually by itself, to learn to control the movements of other parts of the body. Little children also have the power of complete relaxation. This is shown in the way in which they fall. A child running along the street will stumble and fall at full length, only to jump up again and run on as strongly as before. In all probability, such a fall would seriously injure an adult, and certainly there would be a nervous shock. This ability to relax the muscles completely becomes less as the child grows older and becomes more tense and more conscious of its muscular movements.

Every effort should be made to allow free muscular development. Loose clothing of every kind, including loose shoes, utter freedom of motion of the arms and legs, provision of opportunities for play which involve use of the muscles of the body, are all essential. Left alone, children will develop their muscular tissue without supervision and there is little, if any, danger of muscular strain in a healthy child who lives the average normal life, with regular hours of sleep and play, and the proper kind of food. Muscular exercise tends to make all organs of the body function in a

proper manner. The sedentary child, or one who is brought up much indoors, suffers readily from constipation, indigestion and similar troubles. Often the only thing that is necessary to correct this condition is to provide opportunity for free outdoor play.

### *Play and Exercise*

The normal child has an inherent instinct for play. One of the pathetic effects of city life is the provision that it has been necessary to make for supervision of play for young children. Ordinarily there are only two points about which we need concern ourselves in this connection: the first is that the children have a place to play where they can do so with safety and the other is that their play is not vicious. They may safely be trusted to develop for themselves the type of play which most interests and amuses them, and that type is usually the one which does them most good. Outdoor games should be encouraged. Except in very stormy or extremely cold weather, the child of preschool age should be out-of-doors the greater part of the twenty-four hours. Games of childhood are traditional. They pass from one generation to the next as regularly and inevitably as life itself. No one knows how the old nursery games are passed down from child to child, but, generally

speaking, the games of the children of today are not at all unlike those of their parents, their grandparents or even back into the preceding generations.

Except in unusual instances, children do not have to be taught any special games, but one marked characteristic of very early childhood should always be borne in mind. Lack of understanding of this characteristic is more common among the well-to-do than among those less blest with worldly goods. Little children do not care for expensive mechanical toys. They have a creative instinct and want to make their own games and their own play. The imagination of the little child has no limits. An old packing box or piece of cloth that can be made to serve as a tent holds undreamed-of possibilities of happiness. Nine-tenths of the normal games of early childhood exist only in the imagination of the child, and if any aid at all is desirable to help children play, it is the kind that cultivates the imagination rather than retards it by furnishing toys which are warranted to go by themselves and which do not need any help from the child. A normal child can have infinitely more fun out of an old box which is dragged along the street by a string to serve as a doll carriage than it can get out of the most perfect mechanical electrically-propelled train that was ever

made. Children as well as adults grow by expression and in their play they have the opportunity to express themselves quite naturally, without the restrictions which bear so heavily upon them when they are closely associated with the world of adults, therefore toys for children should be of the simplest. Such things as heaps of sand where they may dig to their heart's content, boxes or blocks which cannot be injured but which may be used by the children to form any object which their imagination desires, and, above all, wide and unrestricted play space, are all that are needed to make the average children healthy and happy. Initiative and the power of expression are marvellously stimulated by this kind of play and are almost always retarded, if not killed altogether, by manufactured play and toys that have had done for them all that the child would wish to do for itself.

During the preschool age there should be no formal children's parties. If birthdays must be observed, it should be in the simplest manner possible, preferably with outdoor play and some very simple refreshments, such as ice cream or custard, in addition to the birthday cake. It is far better, however, for children of this age not to have the stimulation that comes from forced play and the emotional excitement that almost always attends parties.

There is also the possibility of the spread of infection. It is a well-known fact that contagious diseases always increase after the holiday periods. The gathering together of children in parties and entertainments is one of the best known methods of spreading infection. As little children are so particularly susceptible to contagion, children's parties should be extremely rare. The emotional excitement is also very bad for young children. Up to the age of five years the emotions are not definitely under control and many children have had the basis of nervous disorders in later life firmly established as a result of the excitement and artificial life connected with being entertained frequently in early childhood.

Another word of warning should be uttered against having children "show off." The precocious child is always a bore to everyone but its parents. The pleasure that normal children can give is delightful, but the precocious child has not a fair chance, because its parents put it in a position where it is unwelcome to others and where it readily acquires that type of egotism which is of all attributes the most distressing that can be found in childhood. Little children should never be urged to recite, to dance or "show off" in any way before others. The nervous excitement is

extremely bad for the child and certainly nothing can be worse than the development of this egotism.

Opportunities for proper play accentuate the great advantages the country child or the child of sensible parents has over children in the city and children who are the victims of over-indulgence and over-care. Old clothes that cannot be hurt, torn stockings and worn out shoes, bruises and bumps, and the opportunity to get thoroughly dirty with mud pies and sand piles, all belong to the right of childhood. Cleanliness and order can and should be insisted upon, in their proper place, but for the greater part of the day the child should be looked upon as a little, growing animal and allowed free expression of its play instinct.

#### *INFLUENCE OF ENVIRONMENT*

Environment consists of all the external surroundings and conditions that affect the development of the person and increase, modify or change the inherited qualities of the individual. It is reassuring to know that, although we may not be able to choose the type of inheritance we would like, and may have to take that which does not accord with our desires, yet we can to a very large extent control our environment, and we can choose

and maintain a proper environment for our children. The time when environment has the greatest effect upon the development of the individual is during early life. In human beings, development of the young covers a far greater period of time than it does in the life history of any other species of animal, consequently fathers and mothers have a very great responsibility in seeing that, during the entire period of development, their children have the right surroundings and the right influences.

During the prenatal period and in infancy, the baby's environment is its mother and her relation to the child is mainly one of protecting it from harm and supplying it with nourishment. It is extraordinary, however, to realize how early in life the child's mind begins to develop and to receive impressions from its surroundings. The whole process of education is largely dependent upon taking advantage of our experiences in the past and modifying our behavior in the future to accord with them. The formation of habits in early infancy is so important a matter that the mother and father are entirely responsible for determining whether the baby's habits shall be good or bad. Throughout the entire life of the child the right kind of environment or surroundings is of the utmost importance.

When they are proper, the child will develop into a person with good habits and fine character, and in this way any desirable inherited traits may be intensified. On the other hand, any inherited traits of undesirable type will become more pronounced if they are not corrected by proper training and proper environment.

Proper training and environment are those influences which develop in a child the habits of self-reliance, clear thinking, receptive mind, truthfulness and independent, honest action. Many books have been written on the subject of proper child training. It seems to be the consensus of opinion that training for good habits must begin at the time of birth. Parents have no right to impose arbitrary standards upon their children after the latter have reached a reasoning age, until the reason for the action has been explained to them. It is far better and wiser to make instructions to children consist of a series of positive statements, such as "Do this" and "Do that" rather than to have the child's life made up of a series of "Don'ts" which are arbitrary in character, and which are never accompanied by any explanation. More and more, as we study the psychology of the child, we come to the conclusion that most of the training of children should begin with the previous train-

ing of their parents. Often it is the faults of the parents, reflected in their management of the children, which cause the formation of many bad habits, and create the antagonistic spirit which leads to disregard of the rights of others and bad character formation.

It is well to remember that we cannot bequeath to our children the education and training we have acquired, except in so far as we may give them the benefit of it by making it part of their environment. Our whole civilization is made up of the experience of former generations which has been handed down through ages. We inherit culture and the various things that make up what we call "civilization" in the same way that we inherit property, but such things are ours only so far as we avail ourselves of them and reflect them in our conduct. Each generation can use the best that the preceding generations have had to offer and through these environmental influences develop its own individuality in the best possible manner.

The kind of family environment that is best for the child does not depend upon money, social prominence or material luxury. History is full of examples of children born of the most obscure parents who have, in spite of their handicaps—I would rather say because of them—risen to positions of acknowledged em-

inence. This does not mean that an environment of hardship is always necessary in order to develop genius. It is not probable that anyone becomes creative because of environment. It is necessary that he must have ability, as a matter of direct inheritance, but it is always possible that the ability might never have been developed if the child had not been brought up in the right environment. What are called great advantages for children are sometimes disadvantages. It is possible for an environment to be "too good." It is quite conceivable that a child may have a diet that is of the most luxurious type, yet it may be extremely bad for its health. On the other hand, a diet of the utmost simplicity and economy may be planned that will furnish all the necessary elements of food to promote the best type of health and growth. The child who is never made to mind, who is allowed to follow its own will, rarely has its character developed in the right direction. It is true only too often that children of wealthy parents have all ambition stifled and all initiative destroyed because they have no stimulus to be anything other than they are. On the other hand, a certain amount of hardship in life, coupled with what seem to be disadvantages and difficulties, often proves a stimulus to the development of proper char-

acter. This does not mean that poverty is necessarily good in itself, or that wealth is necessarily bad. It does mean, however, that children should not be brought up in idleness or luxury, but should have their daily tasks, should be made to feel responsibility for their attitude toward life, should have a relationship of understanding with their parents, and live in an atmosphere where traits of honesty, decency and true culture are common. If these traits occur in a family there need be no apprehension, but rather a feeling of having bequeathed a fine heritage and a still finer environment to the child. Often it is better for the child if there are minor hardships to be overcome and it is wise, even from early babyhood, for the child to be surrounded by an environment which must be met with initiative and a certain amount of exertion. In individual instances, the poor boy or girl from the country who has had to work hard to cope with all the difficulties of frontier or country life may not outstrip the wealthy boy who has been brought up in the city, but, generally speaking, that kind of early environment stimulates self-reliance and the ability to conquer difficult circumstances. Moral and mental development, including ideals, morality, responsibility, habits and thoughts, as well as the type of religion we adhere to, and

the political party to which we belong, are almost entirely the results of environment in the early years of life. The great Cardinal Newman said: "Give me a child until he is seven years old and I care not who trains him afterwards." Whatever happens to us later in life, of one thing we may be sure: that is, that every incident of our environment and training, from the time we were conceived until we pass out of childhood, influences our future lives.

## CHAPTER II

### PERSONAL HYGIENE

Personal hygiene includes the proper care of the body and its organs so that they may function and develop in a normal manner. Proper personal hygiene is dependent to a great extent upon the right kind of surroundings, and the normal development of the young child will result not only from the care that is given to the body, but also from the opportunity the child has of living in a clean, decent and wholesome environment.

#### *Location of the Home*

The location and general character of the house where the child lives depends upon so many factors that often it is difficult to provide the growing child with exactly the right housing environment. Whenever there is a choice, however, between a crowded city and the more open country, or between a roomy house and a limited apartment, the country and the house should always be chosen.

There are many advantages in city life for children, and statistics have proven only too frequently that country children are not better developed nor more free from disease or physical defects than city children. This is because, as a rule, city children have re-

ceived more attention not only from their parents but from the community in order to offset the evils of city life, whereas in the country it has been thought that the fresh air and opportunities for outdoor recreation compensated for many defects in feeding, regular hours and proper attention to the care of the skin and the right kind of clothing. These statements are generalities, of course, because individual cases can be cited with the object of proving that country life is the normal one for children. Certainly, no one can seriously question this statement. The physical restrictions of city life are not only burdensome for parents, but they are distinctly harmful for children. Nevertheless, so much depends upon the child's immediate surroundings and environment that there is no reason why children in cities should not have perfect health. This may require attention and care, and a great deal of effort may be necessary to give to the city child the things that come quite naturally to the country child, but, all things considered, the country child has the greatest natural advantages.

Growing children should always have the opportunity for plenty of play space. As a general thing, this is possible only when the family occupies a detached house with a yard or even a greater amount of ground. In ad-

dition, the house affords greater opportunities for proper ventilation and plenty of sunshine in the living rooms. The noise, dirt and odors of the city streets are absent. Pure, clean milk and green vegetables are, or should be, fresher and more easily obtainable. With the same amount of care and attention given to the child's life, there is little doubt that the country can be shown to have enormous advantages from the point of view of health.

### *Fresh Air and Ventilation*

Growing children need fresh air in abundance. It is absolutely essential for their health. By fresh air is meant not an outing of an hour or so each day, but outdoor life as completely as possible for the entire twenty-four hours. Certainly, the child of preschool age should be able to have most of its recreation in the fresh air except in extremely cold or very stormy weather. In all country climates and where it is possible to have a sleeping porch, the child should be trained to sleep outdoors from the time it is a few weeks old. A porch, preferably one that is above the ground floor, can easily be changed to a sleeping porch. It should be built up on two sides and open on the other two. A roof or awning over the top is advised. The child can be undressed indoors, and, in cold weather, may

wear a warm wrapper while going out to bed on the sleeping porch. Sleeping bags made of a steamer rug or heavy woolen blanket will be found useful. These are made by folding the blanket once over and sewing it across one end and partly up one side, leaving an opening at the upper part of the side and across the top. Snap fasteners should be sewed on this opening, and, after the child has been placed in the bag, the latter can be brought together over the shoulders and down the side. Small openings may be made, if desired, so that the hands may be put through. In very cold weather a woolen cap or bonnet is essential, and some warm type of underclothing, such as flannel petticoats or nightdrawers, with knitted socks, should be added. The face is left uncovered but the other parts of the body should be kept warm and the amount of bed covering used should be just sufficient for this purpose.

If, for any reason, the child cannot sleep out-of-doors, the bedroom should be well ventilated. The windows should be open all night. In order to avoid a draft, a window board or window deflector may be used. This may be made at home, and the purpose of its use is to allow free ventilation without drafts. With the window board, the air comes in between the upper and lower sashes; with

the window deflector, the air comes directly into the room, but is deflected so that there is no direct air current. A good form of ventilation for the sleeping room, particularly in climates where there are high winds, is to take out one of the upper panes of glass and cover the opening with unbleached muslin. This will give excellent ventilation without draft or marked lowering of the indoor temperature. There should be plenty of bed clothing, and with young children it is permissible to use hot water bottles if there is a tendency for the feet to be cold. The bed should be placed so that there is no direct current of air blowing across it. If necessary, screens should be used.

### *Effect of Bad Air*

The human body is usually quite adaptable to its surroundings and people who habitually live in badly ventilated rooms become so accustomed to the close air that they do not seem to notice it, while people coming into the same room from outdoors will be almost stifled. The bad effect of such vitiated atmosphere is particularly marked in children. Children kept indoors in poorly ventilated rooms are almost always pale, underdeveloped and anemic. Usually they suffer from malnutrition, have a poor appetite and are apt to have indigestion. They are almost always

constipated. Marked irritability and lack of concentration, with restless sleep, are all indications that the child is not getting enough air. It is probable that sleeping in badly ventilated rooms promotes the growth of adenoids and enlarged tonsils. Certainly, there are few physical defects or varieties of ill-health in children that cannot be caused by lack of fresh air.

### *Heating and Temperature*

The type of heating and the temperature of rooms are closely associated with ventilation. In the construction of new houses or where there is any choice, the best system of house heating is steam or hot water. Open fireplaces are excellent, particularly for sleeping rooms, as they not only provide heat, but serve as a means of ventilation. The ordinary closed stove is probably the worst type of heating we have. The oxygen in the air is used up rapidly and no method is provided in the heating apparatus for renewing the air. Certain forms of jacketed stoves, however, aid in proper ventilation. Heating by means of gas stoves or oil stoves is particularly bad, especially in bedrooms. They should be used only where the ventilation is free and adequate, and then only for short periods of time. The temperature of the house during

the day should not at any time be over seventy degrees, preferably sixty-five. The sleeping rooms should range from fifty to sixty degrees. In very cold weather the temperature may be lower than this, provided the bed clothing is adequate.

### *Clothing*

The clothing of children as well as adults is worn for several purposes: first and primarily, for protection and warmth; second, for the sake of appearances, for modesty and to express attractiveness or beauty. There are other minor reasons for wearing clothes, which are dependent upon the kind of clothes that are worn; therefore, in dressing children, there should be some knowledge on the part of the mother of the properties and principles of different clothing.

Notwithstanding the impression to the contrary, the majority of children are clothed too warmly. Within the past five years there has been an increasing tendency on the part of intelligent parents to use washable materials for dresses for girls and suits for younger boys throughout the entire year, providing the necessary outer wraps to meet the needs of the outdoor temperature. It is not too much to say that far more harm is done to children's health by too much clothing than by too

little. The body becomes overheated, with resultant tendency toward taking cold and lowering the general vitality. The proper way to dress children is for the temperature of the day, not for the time of year. Generally speaking, with our houses at a temperature of sixty-five to seventy degrees during the winter, the type of clothing worn indoors by the child at that time should be no heavier than when the outdoor temperature registers the same figure. The outdoor clothing in winter can be as heavy as desired, and should afford complete protection to the child's body, head, hands and feet. In hot weather, clothes should be light and few in number. Except for the mere purpose of covering the body, clothing is a burden to children when the temperature goes above eighty degrees. Stockings, hats and caps are not necessary during the hot weather, except that some light form of straw hat may be worn as a protection from the sun. In cold weather, the child's legs should be covered. The fashion of having growing children wear socks throughout the winter, leaving the greater part of the legs and knees exposed, is an extremely pernicious one. The blood vessels supplying the legs lie very close to the surface at the knees and exposure of this delicate part of the body may easily result in lowering the entire body temperature.

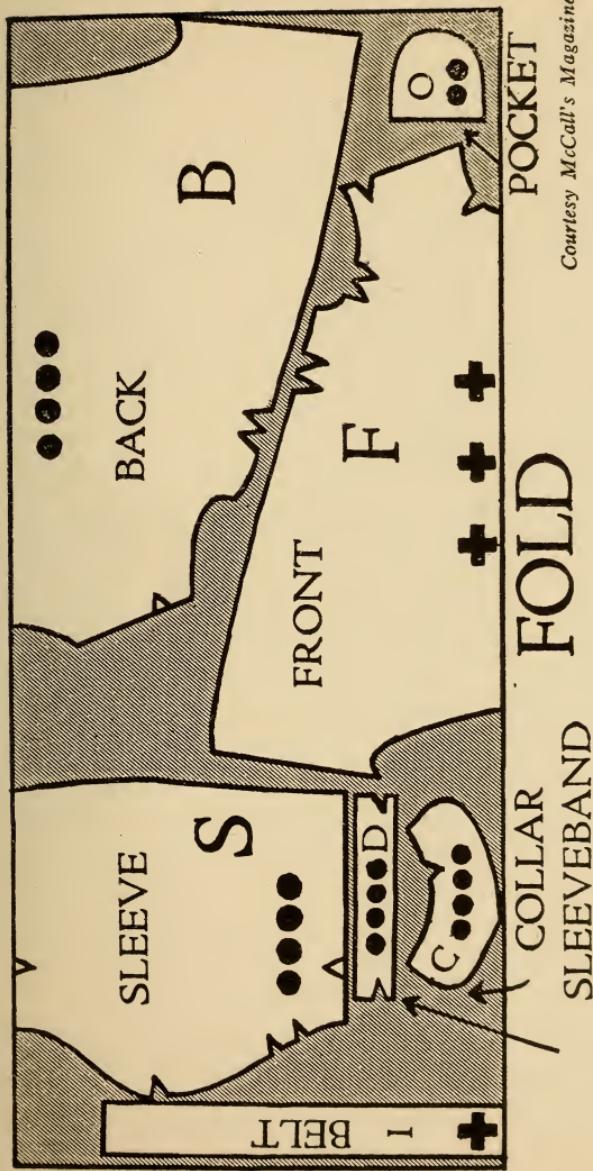
The practice cannot be too strongly condemned.

The two most important principles of clothing children are, first, that there shall be complete freedom of action for the body, and no constriction of any of its parts; and, second, that the kind of clothing should have the property of protecting the body from too great a loss of heat, and that it should be of a type that will absorb moisture from the body surfaces and prevent too rapid evaporation of the secretions of the skin.

The young and growing child should not be restricted in any way by its clothing. Up to the age of six years it is possible to dress boys and girls almost exactly the same way. All clothing should be suspended from the shoulders, never from the waist line. The best type of garters are those that have straps from the shoulders. Round garters should never be used.

The main function of clothing is to keep the body warm and protect it, and it does this by virtue of its power to retain or allow the evaporation of the natural body heat. Warmth of clothing does not depend upon weight, but upon the way in which it is woven. Air is a poor conductor and a thin layer of air next to the body acts as a protection against the loss of body heat. Loosely woven goods which

may retain air in its meshes is warmer than closely woven fabrics. Woolen goods are usually loose in texture, therefore wool is one of the warmest fabrics to be used for clothing in cold weather. Wool has certain undesirable qualities, however. When worn next to the skin it may cause marked irritation. It also has a tendency to shrink when washed, and thereby loses its porous qualities. Woolen undergarments are not advised for children. Frequently it is difficult for older people to change their habits in regard to the wearing of wool, but there is no reason why babies and young children should wear it, except in very cold climates, and even then a mixture of wool and cotton is preferable. Loosely woven mesh cotton shirts are best for children at all ages. They are cheaper, more easily washed, generally more comfortable next to the skin, and if they are of the right loosely woven texture they give sufficient warmth and allow of absorption. In every way they have been shown to be more healthful and their use is advised in early infancy. If material softer than plain cotton is desired, a mixture of cotton and silk or silk alone may be used. All of these are preferable to wool. In cold weather the valuable qualities of air as a non-conductor of heat must be remembered. Several thin loosely woven garments are warmer than one heavy



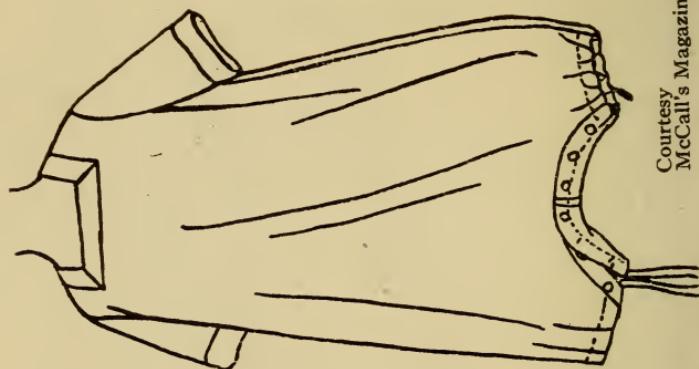
Courtesy McCall's Magazine

Pattern for Child's Rompers

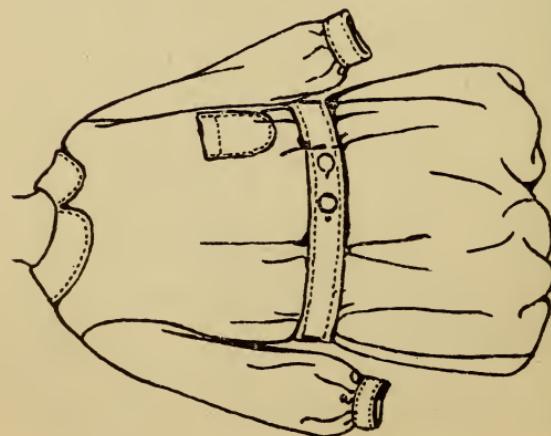
This diagram shows how to lay the 1 year size (View No. 1, next page) on  $1\frac{1}{4}$  yards 36 inch material without nap.

Courtesy  
McCall's Magazine

No. 2. Without nap, with short sleeves.



No. 1. Without nap, with long sleeves.



Child's Romper and Creeper

one, as they allow for layers of air between the garments. For the same reason, several thin blankets on a bed will give more warmth than one heavy one.

#### *TYPE OF CLOTHING*

##### *Outer Clothing*

Under three years of age the most convenient outer garment is the romper. This is a one-piece suit, made perfectly plain, with drawers and waist in one. They should be made of washable material. Later, bloomers with blouses or smocks are suitable for girls, except for formal occasions, while boys may wear loose, washable blouses and trousers.

##### *Underclothing*

During the entire period between two and six years of age, the underclothing should consist of a shirt, preferably of cotton, muslin drawers, soft waist with shoulder straps, but no bones, garters attached either to bands which pass over the shoulders or to the lower border of the waist.

##### *Night Clothing*

For the child under six, nightdrawers are advised. They may be made with or without feet attached. The type with feet is advised for cold weather. In the summer ordinary

pajamas may be used. There is no difference in the night clothes for the boy and the girl. When going to bed, the day shirt should be changed for a clean one which is worn only at night, or the child may, at as early an age as one year, sleep without an undershirt.

### *Shoes*

For the child under two years, sandals or moccasins are the best type of footwear. They should not have any rough seams on the inside, and should be made with soft soles and no heels. After two years of age, the shoes may have a thin, light weight, flexible sole, but heels should not be allowed until the child is at least ten years of age. Shoes for young children should always be of a soft material and sufficiently large to allow the foot full and easy movement. The size should be at least one inch longer and half an inch wider than the foot. The toes should be broad and square. Except in cold weather, children should wear low shoes. In winter, high shoes are advised, and may be either buttoned or laced. They should never be stiffened at the ankles unless on a physician's advice. As children grow older and their play becomes more vigorous, a heavier type of shoe may be necessary, but the principle of no heels, no stiffening in the tops and sufficient length and breadth must

be adhered to. For outdoor wear, rubbers or arctics must be provided for wet and cold weather. It is most important that the child's feet should not be wet, and they should always be examined when the child comes indoors, and shoes and stockings changed at once, if necessary.

#### *BATHING*

The pleasure of personal cleanliness can be impressed upon children at an early age, and such a habit will persist throughout life. Any-one who is familiar with children, however, knows that the bath can be made either a pleasure or a dreaded experience. There is a great lesson in the attitude of the small boy who will go swimming day after day, even when forbidden, but who will protest vigorously when asked to take a bath in a tub. Problems of this sort may be found in every phase of child care. A thing is distasteful and hard when we are forced to do it, but becomes a pleasure and a joy when we do it voluntarily, and in the nature of play. Every mother should understand thoroughly the eternal principle involved in Tom Sawyer's experience with whitewashing the fence. As long as it was work that had to be done, he was com-miserated with and considered a badly used person, but when he conceived the bright idea

of lauding it as a particularly interesting occupation, and offered to allow the other boys to do it if they would pay him a price, immediately it became play of the highest order. Teaching children to keep clean, therefore, needs a thorough understanding of child nature. It must be remembered that the boy who takes a swim does so for the pure joy of the swimming, not for the purpose of keeping clean, whereas he looks upon the bath only as a means of keeping clean, and there is no pleasure attached. The effort to make children like to bathe must begin in early babyhood, and as soon as the child is able to take any part in the process of bathing, he should be encouraged to do so. Floating toys are a help in this direction. Allowing the child to soap itself and to splash about to its heart's content, makes the bath a pleasure instead of a task.

For purposes of cleanliness, there should be at least two warm tub baths a week, and if the child has been playing very hard and getting dirty, it may be necessary to have a cleansing bath every night. In addition to the evening warm cleansing bath, the habit should be established of having a cool sponge bath every morning. Up to the time the child is six or seven years old, the mother or nurse will have

to help with the bathing. After that time, the child should be able to take the bath by itself.

### *Cold Baths*

The cold bath is stimulating, and is best taken in the morning. The child should stand in a tub of slightly warm water and be bathed briskly with water at a temperature of sixty-five degrees. The body should then be rubbed with a coarse, dry towel. The action of the cold water on the skin constricts the superficial blood vessels and sends the blood to the internal organs, thus stimulating them. Breathing is increased in frequency and depth so that the blood gets more oxygen and the nervous system and the mental faculties are stimulated. In certain children this proper reaction does not take place. If there is any blueness of the lips or fingers, if the child shivers and seems tired and weak, if the skin does not show the proper pink color, the cold baths should be omitted.

### *Warm Baths*

The warm cleansing bath removes the sweat and waste matter from the skin, promotes bodily vigor and increases resistance to disease. It is more soothing in its effect than the cold bath, therefore it should generally be given at night. The water may be of a temperature of

ninety-five to ninety-eight degrees. Until the child is about three years old, it is best first to wash the face and head with a wash cloth well rubbed with soap. The soap should then be rinsed off and the body soaped thoroughly. The child should then be placed in the tub and the body well rubbed with a fairly coarse wash cloth. The warm bath should not last over five minutes. Unless the child is very vigorous, it is best not to have the bath last more than three minutes. The warm bath has a markedly sedative effect upon the nervous system. Immediately after the bath at night, the child should be put to bed.

If the feet or extremities are found to be cold after the bath, they should be rubbed briskly, and, if necessary, a hot water bag may be used. If cold feet are more or less chronic, a warm salt foot bath at night is advised. This can be prepared by adding a handful of ordinary rock salt to a basin of water. The feet should be bathed and rubbed for three minutes, then given a brisk rubbing with a coarse towel. All baths should be given in a warm room, where the temperature is from seventy to seventy-five degrees, and after the bath the child should be dressed immediately or put to bed.

Soap, towels and wash cloths should be provided for each child in the family. They may be of a distinct color for each, and may be

marked with the name, but should not be used for any other purpose.

#### *SLEEP AND QUIET*

Rest and quiet are essential throughout the period of bodily growth. At the time when great structural changes are going on in the child's body, it is absolutely necessary that a large part of every twenty-four hours should be set aside for physical and mental adjustment. During the waking hours, certain parts of the body have brief periods of repose. There is a definite rest period between the heart beats. In winking the eyes, there is a brief period of rest. Muscular activity and nervous activity are not constant, but only during the period of sleep is there a cessation of all voluntary movements, which include all of the actions and movements of the body controlled by the will. Digestion, respiration, heart action and the functions of the body that are not controlled by conscious action go on, but at this time the body generally has a chance to recuperate. It is during this period that the child gets the complete rest that is absolutely essential if it is to remain in good health. Grown people may govern their hours of sleep according to their individual needs and desires, each person being practically a law

unto himself. With children, a fixed period must be adhered to.

Late bedtime, with irregular sleeping hours, are particularly harmful to the child. Early rising has its merits, but is entirely wrong if early bedtime also is not insisted upon. Up to the third year the child should sleep twelve hours at night and should have at least one nap of two hours duration in the daytime. From three to six years, there should be not less than ten hours sleep at night, with a two-hour nap in the daytime. If for any reason it is impossible to have the nap in the afternoon, the length of the night sleep should be increased accordingly. There should be a fixed time for going to bed and nothing should be allowed to interfere with this schedule. A seven o'clock bedtime is late enough for any child under six years of age, and in the winter the bedtime may be as early as six-thirty. The best time for the nap is in the afternoon, preferably soon after lunch. It should be arranged for sufficiently early so that there will be a definite period between the end of the nap and bedtime, otherwise it will be practically impossible to make the child go to sleep again. In general, it is easier to get the child to take a nap in the afternoon than in the morning, when it is refreshed after the night's rest.

Even if the child does not sleep, the daily habit of the rest period is advisable, and there should be a quiet two hours every afternoon, with no boisterous play. This is one of the times when the mother may have her own particular quiet companionship with her child, reading stories or playing simple quiet games, which do not involve any muscular activity.

To have comfortable and proper sleep at night, the room should be well ventilated, with a temperature not above sixty degrees. It is well to accustom the child to sleeping on a fairly firm bed. Pillows may or may not be provided, but if they are they should be thin and firm. The last meal of the day should be taken at least one hour before bedtime, and should always be light in character and easily digested. The child should be put to bed in loose, comfortable night clothing. The bed clothing should be warm enough, but without much weight. It should be placed loosely over the child and may be pinned on either side with large safety pins which are made for the purpose. It is best, in the beginning, to accustom the child to going to bed by itself. While there is great temptation to have a story hour just before bedtime, or perhaps a little extra coddling by the mother, this should preferably be done in the afternoon. The child should be placed in a darkened, cool room, in

a comfortable bed, then left alone. Children soon learn that they are expected to go to sleep at this time, and there really is no difficulty with a child who has been well trained in this respect. It is a habit, though, that may easily be changed, and if the child finds that it can have company by crying for it, it will cry every night until it gets what it wants.

Disordered sleep is almost always an indication that something is definitely wrong, either physically or in the training of the child. The physical causes of bad sleep may be poor ventilation, so that the child is restless and irritable, and does not get enough fresh air to breathe, or generally bodily discomfort due to tight clothes or bed clothing too tightly tucked in, or wrinkled sheets. Indigestion, due to eating too rapidly or to improper food, is frequently a cause of wakefulness. Children who have enlarged tonsils and adenoid growths sleep badly. They are almost always restless, turning from side to side in bed and frequently crying out in their sleep. A somewhat similar condition may be noted when a child has worms. Here we may have gritting of the teeth, picking at the nose and extreme restlessness. Inability to go to sleep at the proper time is usually caused by too much excitement at bedtime. The child should be perfectly quiet after supper, and there should be no





*Good Posture*

romping games or excitement of any kind. All playing should be done during the day-time, and supper and bedtime should be quiet and undisturbed.

Sleep sometimes is delayed by fear on the part of the child. Often we can trace this fear back to fright or to some story that the child has heard. There can be nothing more reprehensible than for a mother or nurse to control a child by reciting some fear-compelling story. It is not at all uncommon for children to be told that if they do not go to sleep, either for the nap or at night, or if they do not do certain things, a giant or some ferocious animal will come and carry them off. Such stories make a deep and lasting impression upon the imagination of the little child, and when they are in the dark, by themselves, the fears return in such hideous proportions that self-control is out of the question. The way to meet this condition is by means of prevention, but if the harm has already been done, the child's confidence must be won, and the utmost tact and care used in reassuring it as to its safety. Such children should never be punished or treated harshly. They should be told they are safe, that no harm can possibly come to them, and this must be repeated until they believe it.

The proper treatment for other forms of disordered sleep consists in removal of the

cause. Attention to the presence of physical defects and their correction, a quiet hour before bedtime, a well ventilated room, proper feeding and the correction of any constipation, comfortable bed clothing, and, if necessary, a hot water bag at the feet, are often all that are needed. It must be remembered that going to sleep at night is largely a matter of habit, and the cultivation of this habit must be followed in a regular and orderly manner. The child should not be taken up after it has once been put to bed unless to have its bowels move or to pass urine. After this has been done, it should be returned to bed, the room made quiet and dark, and the child should be left alone. Some children have learned to sleep with a dim light in the room. There is no particular harm in this, provided the light is shaded, nor is there any reason why the blinds of the windows should be closed. Children as well as adults dislike to feel that they are shut in. Under no circumstances should there be a glaring light or one that shines in the face of the child.

#### *NIGHT TERRORS*

Children from two to six years of age sometimes have what are known as "night terrors." The child will go to sleep as usual and then, several hours later, will awaken suddenly with

startled cries. The child is almost frantic with fear and apprehension, and if old enough will often call loudly for help. Sometimes it takes a long time to quiet children when they awaken in this way. The attacks may be repeated for many nights in succession, or there may be definite intervals between them.

### *Cause*

Night terrors have the same cause as any kind of disordered sleep. The reason why a child awakens suddenly may be simply an acute attack of indigestion. Any other physical abnormality that would cause bad dreams would produce the same effect, and the habit is soon established. Some of the most common causes of night terrors are the presence of adenoids or enlarged tonsils, acute indigestion or some local irritation, such as pin worms. Over excitement is very apt to result in this sudden fright at night.

### *Treatment*

The treatment of night terrors consists in removal of the cause and placing the child in good physical condition. Light diet before going to bed is extremely important and every effort should be made to see that the child is comfortable.

*HYGIENE OF THE NOSE AND THROAT*

The bacteria which cause contagious diseases nearly all gain entrance to the body through the mouth and nose. If the child is in a healthy, normal condition, breathes properly through the nose, and has a mouth that is clean and well cared for, the danger of contracting contagious disease is greatly reduced. The nose is the proper organ for breathing. Before air is received into the lungs, it should be clean, moist and slightly warm. The nasal passages are lined with mucous membrane, and this is covered with fine cilia or hairs. When the air passes through the nostrils, these cilia act as fine sieves or filters, and take out of the air practically all of the irritating dust. The mucous membrane lining the nose is also well supplied with small blood vessels which lie very near the surface. As the air goes through the nasal passages, it is warmed by its contact with these blood vessels. Although the nasal passages lead directly back to the upper part of the throat or pharynx, their surface is quite irregular, giving a large area that comes into contact with the inhaled air. This mucous membrane normally secretes a certain kind of moisture, so that the air in this way becomes moist. When air is breathed through the normal nose, we have it properly warmed,

cleaned and of the right degree of moisture. When air is breathed through the mouth, it is taken into the lungs without this change.

### *Care of the Nose*

Normally, the nose does not require any special care during childhood, except to see that it is kept clean. The child should be taught at an early age to use a pocket handkerchief and how to blow the nose. A certain amount of mouth breathing may be caused not by any real obstruction of the nasal passages, but by a nose that is so filled with mucus that the air cannot pass through the nostrils. It is not wise to wash out the child's nose. During the first two years the mother will have to urge the child to blow its nose and give a good deal of assistance. After that time the child who is properly trained should blow its own nose when it is necessary.

### *CARE OF THE THROAT*

#### *ADENOIDS*

When air is breathed through the nose, it passes directly into what is known as the "pharynx" or upper part of the throat, from which it passes into the larynx, then into the bronchi or breathing passages of the lungs. In young children the pharynx is small. The space in it, in relation to the size of the person,

is less than in adult life. In nearly all children there may be found in the pharynx a small, soft mass of tissue which is called an "adenoid" and sometimes is referred to as the "third tonsil." In some instances the adenoid growth is so small that it does not cause disturbance nor obstruction, and its presence may be considered normal. Occasionally, however, the tissue composing the adenoid grows to abnormal size, thus blocking the air passages, and preventing the air from passing through the nose. Adenoids are much more likely to obstruct the nasal passages in early childhood than they are later. They increase in size up to eight or ten years of age. After that the pharyngeal vault grows more rapidly in size, and the adenoids tend to shrink, so that, generally at about the time of adolescence, or from fourteen to sixteen years of age, the obstructive symptoms of the adenoid growth disappear. By this time, however, great harm may have been done if the adenoid has not received proper attention. (See illustration opposite page 64.)

#### *Causes of Adenoids*

While adenoid growths are apt to occur in any child, no matter how well cared for it may be, they are found more frequently among children whose hygienic surroundings are im-

proper. One of the commonest causes of their production is lack of fresh air and proper ventilation. The air in sleeping or living rooms is apt to be too dry or overheated. Adenoids frequently result from the use of pacifiers or from thumb-sucking in infancy. Lack of proper nutrition may also be a predisposing cause.

### *Symptoms*

The most prominent symptom is that of mouth breathing. The appearance of a child who cannot breathe through its nose is so characteristic that, once seen, it is rarely forgotten. Owing to the reduced amount of air that is taken into the lungs, the child generally has a sunken, narrow chest, with shoulders protruding forward. The face has a pale expression and a generally stupid look. Frequently there are dark circles under the eyes, and many indications of undernourishment. Sometimes there is nasal catarrh, with constant discharge from the nose. Such children are particularly susceptible to infectious diseases of all kinds and seem to have little, if any, physical resistance. The mentality may seem impaired and in some instances the child is retarded mentally, and sometimes is considered to be mentally defective. There is

impairment of the senses of smell, taste and hearing, with liability to earache and infection of the inner ear. Colds and bronchitis are common. Frequently there are enlarged glands in the neck, and the child is susceptible to sore throat.

### *Prevention*

This includes attention to the hygiene of the child. Care must begin in infancy. Fresh air, proper food, attention to the hygiene of the mouth and nose, outdoor sleeping, plenty of exercise in the open air are important. Direct contributing causes, such as the use of a pacifier and thumb-sucking, must be cared for in infancy.

### *Treatment*

Adenoids do not require attention unless secondary symptoms are shown. When there is any obstruction, however, in the nasal breathing, if the child suffers from earache or nasal catarrh, or if any marked symptoms of the presence of adenoids are shown, the removal of the adenoid is advised. There are sometimes reasons why this operation should not be performed. The child should be examined by a competent physician and his advice followed.

### *ENLARGED TONSILS*

The tonsils are two masses of lymphoid tissue, situated one on either side of the throat at the back of the tongue. Ordinarily they may be seen quite readily, particularly if a tongue depressor is used, or if the child says "ah." In the normal child, a small amount of tonsillar tissue is present, and the mere fact that the tonsils are large is not an indication for their removal. The tonsils should receive attention only when they are so enlarged that they obstruct the throat or when they are diseased, and so become a menace to the general health. Enlargement of the tonsils occurs early in life and usually reaches its height between the eighth and tenth years. After that time there is a tendency for them to become smaller and rarely, if ever, is there any added growth after adolescence. The oversized tonsil or one that is diseased, however, should be removed early in childhood, because of the danger that may result from its presence.

#### *Causes*

The causes of enlarged tonsils have not been definitely determined. There is known to be some relation between enlarged tonsils and frequent attacks of tonsillitis and a rheumatic tendency. Poor hygienic surroundings, particularly lack of fresh air and improper ventila-

tion, are contributing causes. Enlarged tonsils are frequently associated with adenoid growths and also with septic or unclean condition of the mouth, due to decayed teeth.

### *Symptoms*

When the tonsils are sufficiently large to cause obstruction of respiration, adenoid growths are usually present also. In such cases, mouth breathing results, with all its accompanying conditions. Speech is apt to be thick and full, the child snores in its sleep, anemia and malnutrition result, and the facial expression of the child changes. When the tonsils are diseased, attacks of tonsillitis and sore throat are common. There may be infection of the middle ear. The germs of diphtheria, influenza, scarlet fever and tuberculosis commonly find their resting place in diseased tonsils and gain entrance to the body in that way. Thus, the possibility of contracting infectious diseases is greatly increased and the presence of the tonsils, particularly when they are associated with adenoids, lowers the bodily resistance to such an extent that the child is constantly "catching" some form of disease.

### *Treatment*

In cases of very large tonsils, causing obstruction, or in instances where the tonsils are

diseased, complete removal is the proper treatment. The relief after operation for removal of both adenoids and enlarged tonsils is usually marked. The habit of mouth breathing may continue for a time, and the child should be watched carefully and instructed after such an operation, to see that the proper method of breathing is re-established.

#### *CARE OF THE TEETH*

An unclean mouth, with decayed teeth, gives the most perfect condition for the growth of bacteria. The cavity in a decayed tooth affords darkness, moisture, warmth and food—all the factors that are necessary for successful bacterial growth. Decayed teeth are the most widespread of the physical defects found in childhood. Examinations made in the schools of the country show that from seventy-five per cent to ninety per cent of the children have one or more decayed teeth. Usually, by the time the second teeth have appeared, the proper opportunity for prevention of tooth decay has passed, to a great extent. Sound teeth are of such vital importance to the future health and development of a human being that no effort should be too great to secure proper preventive measures as soon as the first tooth appears.

*Temporary Teeth*

The temporary teeth are twenty in number, ten each on the upper and lower jaws. They appear at about the following ages:

Month	Teeth and Location
5 to 8	Two lower central incisors.
8 to 12	Two upper incisors.
12 to 18	Four lower lateral incisors.
12 to 18	Four front molars, two each on upper and lower jaws.
18 to 24	Four canine teeth, two on upper jaw known as "eye teeth"; two on lower jaw, known as "stomach teeth."
24 to 30	Four back molars

Usually the lower teeth appear before the upper ones.

The importance of the care of these temporary teeth is not generally recognized. Mothers who are careless pay no attention to this matter, feeling that, as the child is to lose these teeth so soon, it is useless to spend money on their care or preservation. The permanent teeth are directly under the temporary ones, and decay of the first set is apt to spread so that the second set is infected and the latter decay almost as soon as they appear. Too early extraction of the temporary teeth causes the jaw to change its shape, and the second teeth, instead of replacing the first ones

normally in their proper positions, are pushed to one side, grow in crooked or by their crowding alter the shape of the jaw.

### *Permanent Teeth*

These are thirty-two in number, sixteen on each jaw. The time of their appearance is about as follows:

Years	Teeth and Location
5 to 6	First molars.
6 to 7	Lower central incisors.
7 to 8	Upper central incisors.
7 to 9	Lateral incisors.
9 to 10	First bicuspids.
10 to 11	Second bicuspids.
11 to 13	Canines.
12 to 15	Second molars.
17 to 23	Third molars (wisdom teeth.)

The first or "sixth-year" molars deserve special consideration. Generally they appear before any of the temporary teeth have been lost through natural causes, and as a result they are often mistaken for temporary teeth and allowed to decay. They come in directly back of the second molars of the first set of teeth. They are the most important teeth we have for grinding purposes, and their loss leads to decided impairment of the function of the teeth, besides contributing to the production of misshapen jaws. It has been

startling to discover, in examining the children who are entering school for the first time, that seventy-five per cent of the sixth-year molars are decayed almost as soon as they appear. This is another reason why early instruction in oral hygiene or care of the first teeth assumes so much importance. Normally, the first teeth will drop out or can be removed with a very slight pull as soon as the permanent teeth that are behind begin to push their way through the jaw.

#### *Causes of Tooth Decay*

Two main causes of tooth decay are uncleanliness of the mouth and teeth, and putrefaction of food in the mouth. The decay is caused by the action of the bacteria on food particles, producing an acid which acts upon the enamel of the teeth, dissolving out the lime salts and starting the first step toward decay. The habit of mouth breathing due to nasal obstruction, improper feeding of soft foods, eating of sweets, and particles of food of all kinds left in the mouth and between the teeth, hasten decay.

#### *Symptoms*

The results of tooth decay are so numerous that it is difficult to mention all of them. Toothache is usually the symptom which first calls our attention to the need of care of the



*Mouth Breathing—Due to the Presence of Adenoids*



teeth. It is, however, nothing more than a warning. Sore or decayed teeth, or a jaw from which teeth are missing, cause the child to chew its food very little, if at all, and to swallow it in that condition. The result is that the child has indigestion, resulting in anemia and malnutrition, with all the symptoms that go with those conditions. Another direct effect of bad teeth may be the occurrence of ulcerated teeth or gum boils. The lymph glands in the neck may become enlarged and inflamed. Decayed teeth form an excellent breeding place for germs. The child is apt to contract infectious diseases, and the improper chewing of food, with resulting malnutrition, leads to lack of bodily resistance to disease. Such children are apt to be irritable, nervous, extremely restless and there is no doubt whatever that in some instances where the child is almost incorrigible, the cause is the continued nervous irritation from badly decayed teeth and constant toothache. Headache is sometimes caused by improperly cared for teeth.

#### *Prevention of Decayed Teeth and Jaw Malformation*

During the period of pregnancy the mother can do much to assure good teeth to her child. She should eat not only wholesome, nourishing

*H*food, but food containing a proportion of lime salts which are so essential in the proper formation of bones and teeth. Cereals, whole wheat bread, milk and eggs, are all needed for this purpose. Absolute cleanliness and care of the mouth of the child should be begun in earliest infancy. As soon as the first teeth appear, they should be washed after each feeding. For this purpose a soft linen cloth or piece of absorbent cotton should be wound around the little finger of the mother or nurse. This should be dipped in a solution of soda bicarbonate (baking soda), one teaspoonful to a pint of water. The mouth does not need to be washed out, but the teeth should be cleansed carefully. From the time the child is two years old, a soft toothbrush should be used for this purpose. By the time the child is three years old, it should be able to use the toothbrush itself. The teeth should be washed night and morning, and, if possible, after the noonday meal.

Many methods of brushing the teeth have been advocated. One consists in brushing the upper and lower sets separately with a circular motion of the brush, and one in brushing the teeth directly up and down. In either method, care should be taken to see that the inside of the teeth is brushed as well as the outside.

One of the best ways to clean the teeth, and at the same time help to make them stronger and firmer, is the use of some food which requires thorough chewing. At one year the child may be given dry crusts of bread and zwieback. For at least two meals of the day there should be some article of food which the child must chew thoroughly. It is probable that the reason why primitive races had good teeth was that they had to do their tooth cleaning in this manner. Their food was not prepared in the careful way in which ours is, and the chewing of tough food not only kept the teeth in a cleanly condition, but made them strong and less likely to decay.

If it is at all possible, the child should be taken to the dentist at least once every six months after the first teeth appear. At that time the dentist can see whether the gums and teeth are in good condition, whether there is any possibility of the jaw becoming malformed, and if there is any slight corrective work to be done. The small expenditure that is required for such care will be repaid many times in later life. The condition of the second teeth depends so largely upon the first teeth, and the type of habits the child has acquired with regard to the hygiene of the mouth, that no effort can be considered too great to keep

the first teeth in good condition and to establish proper habits of mouth hygiene.

#### *EYES AND EARS*

The ear itself should receive no particular attention, except the care that is essential for cleanliness. Under no circumstances should an attempt be made to clean out the ear with any instrument, whether of metal or wood. The outer ear should always be kept clean, but the ear canal should be left alone. The most common affection of the ear in childhood is earache, which is referred to in the chapter on "The Common Diseases of Childhood." Deafness, however, is such a serious matter that there should be some consideration of the hygiene of the ear, particularly as it relates to care of the nose and throat.

#### *CAUSES OF MIDDLE EAR DISEASES OR DEAFNESS*

Adenoids and enlarged tonsils, with resultant chronic catarrh, are contributory causes to disease of the middle ear. There are two fine tubes, known as the "eustachian tubes," which run directly from either side of the throat to the middle section of each ear canal. In any acute inflammation of the throat or pharynx, or in cases of diseased tonsils or adenoids, there is the possibility of some infection going through the eustachian tube to

the middle ear and causing middle ear disease. Neglected colds also may be a cause of some inflammation of the middle ear.

### *Symptoms*

Earache is referred to elsewhere. The early signs of deafness may be the result of inflammation of the middle ear and consequent rupture of the eardrum, or it may be the result of wax that is imbedded in the outer ear canal. Usually it is manifested first by the child's inattention. Frequently this is thought to be stupidity when in reality it is inability to hear properly. Occasionally, children will show this condition by the attitude of straining to hear when spoken to. There may be some impairment of speech.

### *Prevention*

Attention should be paid to all hygienic measures of child life. Any attack of earache should lead to examination of the child to determine the presence of adenoid growths or enlarged, or diseased tonsils. These should receive immediate attention.

### *Treatment*

Treatment of deafness can be outlined only by a qualified physician, and on the first symptoms or indication of any deafness the child should be taken to a doctor at once. It

may be that the only treatment necessary will be removal of the wax from the outer ear. However, if there is actual impairment of hearing, due to disease or as the result of disease of the inner ear, specialized care should be given as early as possible.

#### *CARE OF THE EYES*

Infectious diseases of the eyes are considered under the chapter on "infectious contagious diseases." Ordinary hygiene of the eyes, however, is important in prevention of eyestrain and its early correction and to detect defective vision.

#### *CAUSES OF DEFECTIVE VISION*

In early life the causes of defective vision are eyestrain or some abnormal condition of the eye.

##### *Symptoms*

The symptoms of eyestrain and defective vision in early life are so closely related that they may be considered together. The child may complain of discomfort or even pain in the eyes, particularly if it has been playing at a game which requires close vision. The eyes may itch, smart or burn. There may be increase in the tear secretion so that the eyes water frequently. The conjunctiva or white of the eye and the inner surfaces and edges of the

lids may become congested, red and inflamed. Sometimes there is sensitiveness to light. Books and toys are held close to the eyes and there is evidence that the child does not see clearly. Occasionally the only symptom noted will be that the child is frowning. Reflex or indirect symptoms of eyestrain are headache, nausea, indigestion, car sickness, dizziness, nervousness, outbursts of temper, twitching of the facial muscles, sometimes stuttering or stammering, and there may be impairment of the general health. Some cases of under-nourishment can be traced to continued eyestrain.

### *Prevention of Eyestrain*

In young children the eyes should be shielded from strong light. When they begin to read books, those with large print and unglazed paper should be used and they should never read in a dim light or by artificial light, unless the latter is placed in such a position that the rays will come over the child's left shoulder. It is not necessary to wash out the child's eyes daily, but after playing in a dusty place or if there is the slightest sign of inflammation of the eyes, it is well to wash them out carefully with boric acid solution. This can be done by having the child sit in a low chair, with head bent back so that the child is looking directly

at the ceiling. A perfectly clean piece of gauze or absorbent cotton should be wet with boric acid solution and held about two inches above the eye, then squeezed gently. The excess solution may be wiped off lightly, but the eye should not be rubbed. If any sign of eye-strain develops, the child should be taken to an oculist at once. Defective vision in later life may often be prevented by the use of properly adjusted glasses during the early years.

### *Treatment of Defective Vision*

If defective vision is found to exist, the actual treatment must be left entirely to the physician.

### *Squint (Cross Eye)*

The eyeball is held in place in the eye-socket by means of small muscles. Occasionally one of these muscles will become contracted so that the eyeball will be pulled in that direction, thus causing what is known as "squint" or "cross eye." This condition is not uncommon in young babies but tends to disappear in later life. If it continues after the third month, prompt attention should be given to it. Squint usually results in overstraining the eye that has normal muscles, and also results in poor vision in the affected eye. Occasionally, squint may be corrected by the use of proper glasses.

prescribed by a competent oculist. In other cases, a slight operation, which consists in cutting the contracted muscle, may be necessary. This cannot be decided, however, by anyone but a physician who has had an opportunity of examining the child.

## CHAPTER III

# TRAINING FOR GOOD HABITS

The establishment of proper and regular habits in any child begins at the time it is born. A baby soon learns that if it cries to be taken up and its wish is gratified, it can get anything it wishes by crying for it, and the habit is established. For the immediate comfort of both mother and child, as well as for the future good of the child, proper habits should be established as early as possible in infancy. Reference is made here particularly to physical habits. Mental habits, and those which have to do with proper mental training and discipline, are considered elsewhere.

### *REGULARITY*

The most important single item in training a child to maintain good health is regularity. The time and number of baths each week should be outlined, and the schedule adhered to. Meals should be at definite and regular hours. The child should go to sleep at a stated time and get up at a regular time. If naps are necessary, as they always are for children of preschool age, the child should have its nap at a definite hour each day. It is not necessary to make life a matter of sheer routine, by planning out a time table for the child and

following it, for after a very short time the habit of regularity becomes so fixed that it is not irksome or hampering in any way, and without question the child expects certain things at certain hours of the day, and learns to meet them. Such training lays the foundation for excellent mental habits and is the best beginning we can make toward the right kind of discipline.

#### *TRAINING THE BLADDER*

A beginning can be made in teaching the child to control its bowels and bladder at as early an age as six weeks to two months. A very small chamber or a small, deep dish with wide, spreading edge, should be selected. For the purpose of training the bladder, the mother should sit in a chair and place the chamber in front of her, holding the child over the chamber with its back resting against her knees. This should be done at least four times a day, at regular intervals. In addition, the baby should be placed over the chamber the last thing at night, and if it is awakened for a night feeding, the opportunity may be taken to repeat the procedure.

Training the child to pass its urine in this way is a much more difficult task than training the bowels, but if persisted in and kept up regularly, it frequently is possible within a

few weeks to train the baby so that it knows exactly what is expected of it, and when placed on the chamber it will pass its urine. Even if such training does not begin at the very early age mentioned it should never be neglected beyond the eighth or ninth month, and if begun at that time it is almost always possible to train the child so that, by the time it can run about, it is able to control its bladder, and to make known when it wishes to pass urine.

#### BED-WETTING

With proper training, a child should learn to control its bladder by the time it is a year old. Occasionally, however, there are cases where, with the best of training and perfect control during the daytime, the child seems unable to avoid wetting the bed at night. Occasionally, children have good habits in this regard until they are four or five years old, then suddenly begin the habit of bed-wetting.

#### *Causes*

When a child continues to urinate at night, notwithstanding all efforts that have been made to control the habit, the cause is usually beyond its control and consists of some physical defect or irritation. It may be that the child is suffering from enlarged tonsils or adenoid growths, which prevent proper breath-

ing and cause extreme restlessness throughout the night. Chronic constipation, pin worms or some other irritation around the genital organs are also exciting causes. Wrong feeding, that is, food taken late at night or too much liquid, contributes toward the habit of bed-wetting.

### *Treatment*

The establishment of good habits is the most important and first method to be followed. The child should be taught to have regular times for passing the urine throughout the day, and should be placed on the chamber at such regular intervals. It may be necessary to do this as often as once every hour in the beginning of the treatment, but the interval can be lengthened later to once every three or four hours. In every instance, however, the child must be placed on the chamber the last thing at night and once or twice during the night. The diet should be adjusted so that the child has no liquids after four p. m. Supper should be very simple, consisting of easily digested foods such as cereal with butter but no milk, some crackers or toast, and stewed fruit. If physical defects are found to exist, they should be removed. The suspicion that pin worms may be present should be investigated and proper treatment given. Constipation must be corrected, and it may be

necessary to have an examination made of the child to see if there is any irritation about the genital organs. If other methods fail, raising the bed at the foot should be tried. Blocks may be placed under the foot of the bed so that it is raised four or five inches. The child should sleep without a pillow, so that the head may be distinctly lower than the rest of the body.

Sometimes bed-wetting is caused by the child habitually lying on its back. An easy way to correct this tendency is to take a long strip of muslin and tie a knot in the center. The strip should then be placed around the child's body so that the knot comes directly in the middle of the back. It should be tied loosely so that there will be no constriction. When the child falls asleep and attempts to lie on its back, the knot immediately makes it uncomfortable and causes it to turn back on its side.

A child should never be punished for this habit. There is no doubt that children so affected suffer mentally from this failing and would gladly control themselves if they could. If, after all possible methods have been tried, the bed-wetting still continues, a certain amount of moral suasion may be used. Even in such cases, however, it is better not to use it in the nature of penalties, but rather in the

nature of rewards. The child may be told that it may have certain things it wants or that it may do certain things it considers desirable, if the habit is controlled. When all home measures fail, the child should be examined carefully by a competent physician to determine whether there is any physical cause for the continued habit.

#### *TRAINING THE BOWELS*

Training the bowels is not as difficult as training the bladder. Constipation is extremely common in infancy, and if allowed to continue it becomes almost chronic during childhood and later life. There are few bodily conditions which cause so much ill health as constipation. The failure of the body to get rid properly of these waste products leads to a kind of self-poisoning which is always reflected in some type of ill health. Learning to have the bowels move regularly is one of the cardinal points in the training of childhood. The training may easily be begun when the child is not over six weeks of age.

At that period the average child will have from two to three bowel movements a day, therefore the training can take place at the same time that the child is placed on the chamber to pass its urine. At first no results will be noticed. The child will not under-

stand what is expected of it, and in all probability the bowels will not move. The main point is to establish the habit of putting the child on the chamber at exactly the same time each day, preferably immediately after breakfast, before the afternoon nap and the last thing in the evening. The training hours, once established, must be adhered to strictly. If the bowels do not move after the first week or two of this schedule, it is permissible to use a small soap or gluten suppository. These will almost always stimulate the bowels to move, and if used only at the time the child is placed on the chamber, it will soon learn just what is expected at this time. Ordinarily, after a few weeks, it will not be necessary to use a suppository and the child will have a perfectly normal movement without it.

#### *CONSTIPATION.*

##### *Causes*

Neglect of a regular time for bowel movements is the most ordinary cause of constipation. The next most prominent cause is the wrong type of feeding. The child does not get enough coarse food to eat—that is, whole wheat bread, cereals or fibrous vegetables. Frequently, children do not have enough variety in their food, and not enough liquid. Occasionally, a child is getting too much milk.

Some parents have the idea that because milk is a very nutritious and wholly desirable food for young children, it may be given to the exclusion of other articles of food. That is not so, and the child from two to six years of age should not receive over one and a half pints of milk a day as the maximum. The remainder of the diet should be made up of a varied assortment of other types of food. Occasionally, children from two to six years of age suffer from constipation because the toilet seat is not adjusted to suit them. The seat may be too high and they cannot rest their feet against anything that will give their abdominal muscles an opportunity to aid in the process of expulsion of the bowel contents.

### *Treatment*

Chronic constipation cannot be cured by the use of drugs or the continued use of enemas. These may be used as emergency measures and on the doctor's advice, but continued use of any laxative or cathartic medicine or enemas tends to weaken the natural power of the bowel to expel its contents, and ultimately makes the constipation much worse.

If it is necessary to use medicine for the relief of constipation, milk of magnesia in tea-spoonful doses from one to four times a day is

advised for very young children. A mixture of rhubarb and soda is a mild laxative, and may be given in teaspoonful doses four times a day. Compound licorice powder, a teaspoonful dissolved in a quarter glassful of water, is an excellent cathartic when given at night. Castor oil or calomel should be used as a cathartic only at the beginning of acute illness or when there is an indication of general constitutional disturbance. All these drugs, however, are subject to the limitations mentioned above, and should be used for a short time only, or in the presence of acute illness or some other condition of emergency.

Other adjustments in the child's life that are necessary to correct constipation are indicated by the causes. A regular time for going to the toilet is of the first importance. The diet should be adjusted to suit the individual needs of the child. More rough food, such as cereals, whole wheat bread and fresh vegetables, should be given. The child should have fruit, preferably orange juice or prune juice, every morning, with stewed fruit at the evening meal. The amount of milk taken each day should be controlled with reference to the needs of the child, with an allowance of one and a half pints between two and six years of age. The diet should be varied. A special toilet seat should be built for the child, which

can be adjusted to its growth. In addition to these measures, regular and systematic exercise outdoors will be found one of the greatest aids in controlling the habit of constipation.

### **THUMB SUCKING**

Thumb sucking is a habit which is usually acquired in early infancy. The habit is harmful and every effort should be made to correct it.

#### *Causes*

The causes are mainly those of habit and possibly a nervous tendency on the part of the child.

#### *Results*

If begun in early infancy, thumb sucking will often cause a misshapen mouth and jaw. The upper jaw is apt to protrude, the lips become soft and flabby, the teeth may be irregular and the constant sucking tends toward the formation of adenoids and enlarged tonsils, with resultant mouth breathing. In addition, the habit is a filthy one, in that the child's thumb may be dirty and thus convey infection to the mouth. Some children suck a finger instead of a thumb, but the results are the same. Occasionally, young children have the habit of sucking a piece of bed clothing or their own clothing, or some other

object. Such cases vary little, either in their results or treatment, from thumb sucking.

#### *NAIL BITING*

This habit usually begins when the child is two or three years of age. It is more common in nervous, shy children, who may acquire the habit as a means of covering embarrassment. It may be acquired, also, as the result of copying the habit in others. Once acquired, it persists even into adult life, if strenuous efforts are not made to control it. The results are shown in badly disfigured nails and fingers. At times the biting goes on to such an extent that the nails are almost completely bitten away, and may even become badly infected. The habit is so disfiguring that every effort should be made to control it at as early an age as possible.

#### *Treatment*

The treatment of thumb sucking and nail biting should be wholly mechanical. The use of bitter drugs on the ends of the fingers has not been found to be successful, and their long continued use may easily result in upsetting the child's digestion.

For very young children, round aluminum mits which fasten over the child's hands are sometimes used, but they are not as good as a form of elbow cuff. The aluminum mits

prevent the child's putting its fingers into its mouth, it is true, but at the same time they also prevent its playing or using its hands for any other purpose. The safest mechanical restraint is an elbow cuff which is made by taking a piece of cardboard from four to six inches long and from six to eight inches wide, depending upon the size of the child. The cardboard should be rolled into the form of a cylinder and the edges pasted or sewed together. Adhesive plaster may be used for this purpose. The cardboard should be stiff enough so that the cuff will not bend, and the cuff should fit loosely over the child's elbow, reaching a point midway between wrist and elbow at the lower edge and midway between elbow and shoulder at the upper edge. It should be fastened to the child's dress with safety pins. This type of cuff allows the child to use its hands with perfect freedom, but does not permit it to bend the elbows so that its fingers can reach its mouth. This method of restraint should be carried on both day and night until the habit is completely controlled.

#### *MASTURBATION*

Masturbation or self-excitement of the sexual organs may occur even in early infancy. At that time it is comparatively easy to control. When it occurs in later childhood, however, it

may prove to be exceedingly difficult to deal with.

### *Causes*

The causes of masturbation in young children are usually physical. There is almost always some irritation about the genital organs. In the boy this may be due to a constricted foreskin or in the girl there may be some adhesions present. Occasionally the irritation caused by pin worms will make the child begin the habit of masturbation. Usually children are quite unconscious of the habit, except that it gives them a more or less pleasurable emotion. Older children may consciously copy the habit from others, but before five years of age it is probable that in some wholly innocent way the child observes a certain amount of pleasure to be obtained from friction of the genital organs, and thereafter repeats the process.

### *Symptoms*

The child may be noticed handling the genital organs or may be seen to rub the lower part of the body against some article of furniture or the act may be accomplished by the child simply rubbing its thighs together. Usually the face becomes slightly flushed, followed by some perspiration, and invariably

the child is more or less fatigued and often drowsy afterwards.

*Treatment*

The treatment consists in very close observation. If the friction is carried on with the hands, the aluminum mits may be used. Such children should be kept under constant observation throughout the day. At night they should be put to sleep with a pillow between the legs. Attention must be paid to any physical defect or local irritation that may be present, and the doctor should be consulted if there is any possibility of adhesions being present in the girl or tight foreskin in the boy. There is no medical treatment for this habit.

## CHAPTER IV

### FOODS AND FEEDING

A child's health depends almost entirely upon its nutrition, and nutrition to a great extent is dependent upon the amount and kind of food the child eats. The science of feeding babies has received a large amount of attention for many years, because it has been realized that the baby's life may be dependent upon the selection of the proper food. After the weaning period, however, less attention has been paid to the matter, notwithstanding the fact that during the preschool age period we must lay the foundation for health in after life, and that any wrong feeding or under-nourishment during that time will affect the nutrition and growth of the child in a manner that cannot be corrected later.

Adults need food for two purposes: replacing waste tissue and supplying energy. Children need food for these purposes, and, in addition, for the promotion of growth. The child's need of proper food for those purposes far exceeds that of the adult, and in proportion to its size, the child requires for the maintenance of proper bodily nutrition three times as much food as the grown person needs.

In order to determine what types of food and feeding are best for the growing child,

it is necessary to understand something of the characteristics of the foodstuffs themselves. All foods contain one or more of the following elements: fats, protein, carbohydrates (starches and sugars), mineral matter and water.

### *Fats*

Fats in food furnish energy and heat for the body. They serve the same purpose as fuel does in a stove or furnace. While some fat is stored in the body for the protection of the muscles or as a reserve which is drawn upon for any unusual effort or when extra bodily heat is essential, the main use is to give warmth to the body and to provide necessary energy. Because of their heat-giving qualities, it may readily be seen that the fats are more acceptable and digestible in cold than in warm weather. They are found mainly in butter, cream, cheese, oils, nuts and in certain kinds of meat and fish.

### *Protein*

Protein in food forms the body structures; that is, it builds the tissues, such as the bones and muscles. Also, it replaces waste tissue that has been used up in the exercise of energy. Protein is of great importance in promoting growth. It occurs in lean meats, fish, eggs, milk, grain such as oats, wheat and rice, and

in the fleshy vegetables, such as beans, peas or lentils.

### *Carbohydrates*

Carbohydrates are taken into the body chiefly in the form of sugars and starches. They are heat and energy-producing foods, and are essential for growth. The starches occur in certain vegetables like peas, beans, potatoes and corn, and in the various forms of grain. Sugar occurs in its natural form, also in fruits and in many other foods.

### *Mineral Matter*

Mineral matters are used mainly in building up the mineral tissues of the bones and teeth. They are extremely important to the growing child, just as they are important in the diet of the pregnant woman. They occur in a large variety of foodstuffs such as the cereals, milk and eggs. They occur also in common salt, and may be found in certain vegetables such as spinach, cabbage and celery.

### *Water*

Water is contained in food in order to hold the particles in suspension or to dissolve them. In the body, water forms a large part of all of the tissues and is essential to sustain life. It acts also as a diluent and a means whereby

waste products may be carried off from the organs and tissues of the body. It is present in practically all foodstuffs.

Great advances have been made recently in the consideration of types of foods that best promote growth and nutrition. It seems to be determined that certain kinds of food, although appetizing and hitherto considered of great nutritive value, have in reality very little to recommend them except their taste and the fact that they satisfy the appetite. Recent investigations have demonstrated the presence of what are known as "vitamines" in certain kinds of foodstuffs. Vitamines are those principles in foodstuffs which furnish a certain element that is absolutely essential for growth and nutrition. These vitamines have certain qualifying names: that is, there are the fat soluble vitamines which are contained in certain kinds of foods. They are especially abundant in butter-fat, milk, the yolks of eggs, cod liver oil or any other oil or fat of animal origin and in the leafy and some other vegetables. They are also found in kidneys, sweetbreads and liver. Some article of food containing these vitamines must be present in the diet if proper growth and nutrition are to be maintained. The second type of vitamine is known as the water soluble vitamine. It is found par-

ticularly in milk, eggs, whole wheat, tomatoes, turnips, the green, leafy vegetables such as lettuce, cabbage, cauliflower, spinach and the tops of beets and turnips, and the juicy fruits, such as oranges, lemons and grapefruit.

There is a third vitamine, known as the "antiscorbutic vitamine." This is the type of vitamine or health-giving principle which prevents scurvy and which is found in certain types of fresh foods such as milk, some vegetables, fruit juices and the juice of tomatoes. In infancy, the juice of canned tomatoes or the juice of oranges may be used to prevent scurvy. This is not necessary if babies are breast fed or fed on fresh, raw milk, but is essential if the milk is pasteurized. After infancy, when the child is getting other foods, the use of some definite antiscorbutic food is not so essential as it is in infancy, nevertheless some of these foods must be included in the regular dietary. This is one of the reasons why milk, fresh vegetables and fresh fruits are so important for the growing child.

The great importance of mineral matter, particularly calcium, in foodstuffs, should be emphasized. These salts are essential not only in building up the bones and teeth but they have a favorable influence on the body in general and are necessary for the main-

tenance of good health. They are found in a large variety of vegetables. When the latter are cooked in water for any length of time, the salts are usually extracted and remain in the water in which the vegetables were boiled. This water, therefore, has great nutritive value and should never be thrown away but used in some form of cooking. It may be made palatable when used as the foundation for gravies or soups.

Proper diet for any growing child, therefore, must contain not only the actual food constituents in a reasonable balance, so that the needs of growth may be met, but it must also contain the foods in which the vitamines are found, otherwise the child will be undernourished and underdeveloped. The proteins of cereals and meat are important, as are the starches of certain tubers and fleshy vegetables. The fats of vegetable origin will furnish heat and energy to the body, and all of them are needed for proper development. It cannot be emphasized too strongly, however, that any diet consisting simply of meat, potatoes or other root or fleshy vegetables and cereals will not maintain the proper and regular nourishment of the body, particularly that of the growing child. Such foods must have a liberal accompaniment of the two main types of food-

stuffs that contain the vitamines: first, milk, and second, the leafy vegetables.

#### *TYPES OF FOOD*

##### *Milk*

Milk in itself is an almost perfect food, and when necessary it can be taken alone and will sustain life. There is no time in the life history of the individual when the use of milk should be neglected. It is the most nearly perfect food that we know anything about and is the only perfect food for the baby or child.

Milk is essential for the diet of the growing child, but it must not be used to the exclusion of all other foods. There is a certain tendency to rely too much upon milk as a proper diet for young children. Even in infancy it is well to supplement the milk diet with some other types of food after the baby is from six to eight months old. From one to two years the child should have at least one quart of milk a day, and from two to six years, one and a half pints. If the milk that is used comes from Jersey cows, it should have part of the cream removed before it is used. If more than this amount of milk is given, the child is apt to be satisfied with the milk diet alone and to lose its appetite for other foods. This should not be allowed to occur. One

and a half pints of milk a day is absolutely necessary, and can be given partly in the form of fluid milk—that is, a glassful between meals and at night—and the rest can be given either in small amounts with meals or in the form of soups, ice cream, junket or cooked with vegetables. The milk given to young children should never be ice cold, although it must be kept cold in the home from the time it is received until it is used, and should never be above fifty degrees Fahrenheit in temperature.

### *Cereals*

The cereals given to young children should be well cooked. Although there are on the market many types of cereals that are advertised as already cooked, they should be cooked again for two or three hours. A fire-less cooker is excellent for this purpose, as the cereal can be prepared the night before and will be ready for use the following morning. Dry cereals are not advised for young children. They do not contain an amount of nourishment equal to that of the cooked cereals and their bulk is apt to satisfy the child's appetite so that it will not eat other and more nourishing foods. The best kinds of cereals for young children are oatmeal, hominy, farina, corn meal, the wheat foods

and rice. The latter should not be polished white rice but the so-called brown or natural rice.

### *Meats*

Young children should not have meat more than once a day; in fact, it is perfectly possible to fill all the requirements of a mixed diet if meat is given not more than three times a week. The best kinds are beef in the form of roast or beefsteak, lamb roasted or lamb chops or well cooked chicken. It is important that the child should be taught to chew all meat thoroughly. In this way the food is subdivided into small portions before it reaches the stomach and therefore is more readily digested, and the process of chewing is excellent for strengthening and cleaning the teeth.

### *Fish*

Fish should never be served to a child on the same day with meat. Nearly all fresh fish that are caught in local waters are recommended. It should always be broiled or boiled, never fried.

### *Eggs*

Eggs should not be used at the same meal with either fish or meat, but, unless the child has some marked idiosyncrasy to eggs and is

unable to eat them, one should be included in the diet every day. It may be either cod-dled, poached, scrambled or soft boiled (two minutes), or it may be cooked in the form of custard or other food.

### *Vegetables*

Particular stress must be laid upon the value of the leafy vegetables in the diet of the growing child. These, with milk, form what are called the "protective" foods, without which growth and proper nourishment are impossible. When vegetables are cooked, the water in which they have been boiled should be saved and used to make soups and gravies. The following list of vegetables may be used for young children: lettuce, celery, spinach, well cooked cauliflower, Brussels sprouts, Swiss chard, asparagus, string beans, carrots, peas. Potatoes may be given once a day. They are best baked or boiled with their skins on, although mashed potatoes may be used occasionally for variety.

### *Bread*

Some form of bread should be included in each meal, but children under six years of age should never eat bread that is less than twenty-four hours old. Toast, crackers and zwieback may be used by way of variety.

*Fruits*

For young children great care must be taken that fruits are eaten only in season and when not either green or overripe. Apples are best when baked or made into apple sauce. Whole berries should not be used until the child is over four years old, although the juice of berries may be given after one year. Peaches, cherries and grapes may be given in moderation, but only when perfectly ripe. A good rule is to use fresh fruit in the early morning and stewed fruit at night. Orange juice or the juice of canned tomatoes may be considered a standard article of diet to be used throughout the year.

*Soups*

Children may eat most varieties of plain soups, including meat broths, vegetable purees and cream soups made with milk and the water left from cooking vegetables.

*Desserts*

Sweets in moderation are a necessary part of the diet of the growing child. It is better however, to give them with meals in the form of desserts, and for this purpose the best types of sweets are cooked fruits, simple puddings made with milk, such as bread pudding or

rice pudding, baked or boiled custards, junket or ice cream. A small amount of sweet chocolate or plain sugar candy may be given for dessert after the child is three years old.

### *Foods to be Avoided*

During the preschool age there are certain foods which are harmful. They have very little nutritive value and are too rich and heavy for the delicate digestive organs of young children. General types of food to be avoided are pork in any form, including ham and sausage, corned beef, veal, game including duck, salt fish, sauces and any highly spiced or over-seasoned food, fried foods, raw celery, radishes, cucumbers, green corn, raw tomatoes, rich cakes or puddings, pastry or hot breads. Children under six years of age should never drink tea or coffee.

### *GENERAL RULES FOR FEEDING*

In childhood, as in infancy, regularity in feeding is of the greatest importance.

While three meals a day for the growing child may be taken as a basis, during early childhood there may be an additional lunch either in the middle of the morning or the middle of the afternoon, consisting of milk or cocoa with crackers or bread.

Meals should be given at regular hours each day and the routine should never be interfered with. Up to the age of six years, the child should have its hearty meal or dinner in the middle of the day, with a light supper at night.

After the age of two years, it is better to have the child sit at the family table. It is understood, however, that when this

is done the child's diet should be adhered to absolutely. When it seems necessary there is no real reason why a child should not eat alone, but the habit of eating with the family, observing proper mealtime habits and learning to do without foods that are available, is splendid training. Also, it is helpful for the mother who has to prepare her own meals not to have separate and additional ones to prepare for the child.

There is far more harm done by overeating in childhood than by undereating. Care must be taken to see that the amount of food the child gets is adjusted to its needs and not merely to its appetite.

All children need less fats in summer than in winter. During the hot months the amount of fats and meats eaten should be reduced.

All children need water. Every child should be required to drink at least two glassfuls of water a day between meals and may be allowed one glassful with meals. Water with meals should not be allowed simply to wash down the food but should be taken throughout the meal to dilute the food and make it easier to swallow and digest.

All food should be chewed thoroughly. A child should not be allowed to bolt its meals.

### *Idiosyncrasies with Regard to Food*

Some children are unable to eat certain types of food. This does not mean that they dislike the food but that it disagrees with them. Usually the types of food that may produce certain forms of illness in sensitive children are eggs, certain kinds of fruit (particularly berries), cereals and fish. The production of the illness may not have anything to do with the purity or freshness of the food but it is an indication that the child has some peculiar reaction to the particular type of food and is unable to eat it without suffering

from attacks of hives or sudden and acute attacks of vomiting or diarrhoea. If it is certain that the food is fresh and properly prepared, the child should not be again urged to eat it unless on the advice of a physician.

*SAMPLE DIETS FOR CHILDREN FROM ONE TO SIX YEARS OF AGE*

*Twelve to Eighteen Months*

6:30 to 7:00 a. m. Juice of one orange or  
Two tablespoonfuls prune juice or  
Two tablespoonfuls pineapple juice.

7:00 to 7:30 a. m. Two or three tablespoonfuls of cereal, such as oatmeal, hominy, farina, cream of wheat or wheatena, made very thin and served with milk and a small amount of sugar.  
Glass of milk (eight ounces).

11:00 a. m. Glass of milk (eight ounces).  
Cracker or piece of zwieback or piece of stale bread with crust.

1:30 to 2:00 p. m. One article to be selected from each of the following groups:

1. Beef juice, two to four tablespoonfuls.  
Coddled egg.  
Scraped beef, one tablespoonful.  
Mutton or chicken broth, one cupful.  
Minced chicken, one tablespoonful.  
Vegetable soup, one cupful.
2. Bread, zwieback or cracker.
3. Baked or mashed potato, rice.

5:30 to 6:00 p. m. Cereal and milk.  
Zwieback or stale bread, toasted.

10:00 p. m. Glass of milk (eight ounces).

Note—Raw fruit juice should not be given at the same meal with milk. It should be given either one-half hour before or one-half hour after such meal.

*Eighteen to Twenty-four Months*

6:00 to 7:00 a. m. Two ounces of orange juice or  
Pulp of six stewed prunes or  
Two tablespoonfuls baked apple (strained) or  
Two tablespoonfuls pineapple juice.

7:00 to 8:00 a. m. Three tablespoonfuls of cereal with milk and a  
small amount of sugar.  
Glass of milk (eight ounces).  
Piece of toast or bread, buttered.

11:00 a. m. Milk (eight ounces).  
Cracker, zwieback or bread.

1:30 to 2:00 p. m. One article to be selected from each of the  
following groups:

1. Beef juice, two to four tablespoonfuls, with  
bread.  
Egg, soft boiled, poached or coddled.  
Scraped beef, one tablespoonful.  
Mutton, chicken or beef broth, one cupful.  
Minced chicken, two tablespoonfuls.  
Vegetable soup, one cupful.  
Lamb chop.
2. Bread, zwieback or cracker.
3. Boiled rice, small baked potato, spinach,  
well cooked carrots, fresh peas.
4. Cornstarch pudding with milk, rice pudding,  
baked custard, junket, two tablespoonfuls  
pulp of baked apple or pulp of six prunes.

5:30 to 6:00 p. m. Cereal and milk.  
Zwieback or stale bread, buttered.  
Stewed fruits.

10:00 p. m. Milk (eight ounces).

Note—Raw fruit juice should not be given at the same meal with milk. It should be given either one-half hour before or one-half hour after such meal.

*Two to Four Years*

7:00 a. m. Juice of one orange or  
Pulp of six stewed prunes or  
Two tablespoonfuls of baked apple or  
Two tablespoonfuls pineapple juice.

8:00 a. m.	Cereal of medium thickness, four tablespoonfuls with milk and one teaspoonful of sugar. Egg, soft boiled, poached or coddled. Toast or stale bread, buttered. Glass of milk or cup of cocoa.
10:30 a. m.	Glass of milk (eight ounces). One slice of bread, cracker or zwieback.
1:30 p. m.	One article each from groups 1, 3, 4 and 5 or 2, 3, 4 and 5: <ol style="list-style-type: none"><li>1. Chicken or beef broth, vegetable soup, milk soup made with a little potato or celery.</li><li>2. Egg (poached, coddled, boiled or scrambled), tablespoonful of minced beefsteak, lamb chop, roast beef, broiled steak, chicken, fresh broiled or boiled fish.</li><li>3. Baked, boiled, creamed or mashed potato, rice, macaroni.</li><li>4. Two tablespoonfuls of fresh or canned vegetables such as peas, string beans, spinach, asparagus tips, squash, stewed celery. All these vegetables should be well cooked.</li><li>5. Rice or bread pudding, junket or custard, apple sauce or baked apple. Two tablespoonfuls of plain vanilla ice cream, once a week.</li></ol>
5:30 p. m.	Cereal with milk toast or stale bread, lightly buttered. Egg, poached, soft boiled or coddled. One cup of milk or cocoa made with milk. Custard or stewed fruit.

Note—Raw fruit juice should not be given at the same meal with milk. It should be given either one-half hour before or one-half hour after such meal.

In this age group a cupful of milk and bread or a cracker may be given in mid-afternoon or at bedtime, if the child seems hungry. Give an egg at only one meal a day.

*Four to Six Years*

7:00 a. m.	Juice of one orange or Baked apple or Stewed prunes. (Fresh fruit may be given in season, except raw apples, which should only be eaten later in the day. Fresh berries in small amounts may be given.) Cereal with milk and one teaspoonful of sugar. Glass of milk or cup of cocoa, made entirely with milk. Bread or toast with butter. Egg, soft boiled, poached, coddled, scrambled or omelette.
10:30 a. m.	Glass of milk (eight ounces) and bread.
1:30 p. m.	Select one article from each of groups 1, 3, 4, 5, and 6 <i>or</i> 2, 3, 4, 5 and 6: <ol style="list-style-type: none"><li>1. Chicken, beef or mutton broth, vegetable, pea or bean soups or thick milk soups, strained before using.</li><li>2. Chicken, lamb, lamb chop, roast beef, beefsteak, minced beef, fish broiled, boiled or baked, egg poached, soft boiled or coddled.</li><li>3. Vegetables in season, except green corn, egg plant or raw vegetables such as radishes, cucumbers or tomatoes.</li><li>4. Potato, baked, boiled or lightly mashed.</li><li>5. Bread and butter.</li><li>6. Stewed fruit, peaches, prunes, apricots or apples, cookies or ginger snaps, plain cake, rice, tapioca, cornstarch or bread pudding, junkets or custards, ice cream (not oftener than once a week), jam, jelly, honey, dates or figs.</li></ol>
5:30 p. m.	Cereal with milk and sugar or Milk toast or Thick soup such as pea or cream of celery or Egg, coddled, poached, boiled or scrambled.

Cocoa made with milk, or a glass of milk (eight ounces).

Bread and butter.

Plain pudding, cookie or ginger snap, stewed fruit.

Note: Raw fruit juice should not be given at the same meal with milk. It should be given either a half hour before or a half hour after such meal.

Give an egg at only one meal of the day.

### *Diet in Illness*

During illness the amount of food given should be reduced. In case of vomiting or diarrhoea, it is best to give nothing except plain water or milk for the first twelve hours. As proper diets vary for different diseases, the directions of the physician should be followed in every instance, but if the matter is left to the family, there are certain principles that may be used as a guide.

In general, liquid or semi-liquid diets are advised in every instance where there is a high temperature. These may take the form of milk, simple milk soups, cereal gruels made thin with milk, broths, custards, milk toast, junket and ice cream. The sick child usually has little or no appetite, therefore the food should be served not only at regular intervals but it is very necessary that it should be served in a tempting manner. Often the child who will not drink milk at all from a large pitcher and glass may be induced to take

it when it is served on an attractive tray and the child itself is allowed to pour the milk from a small pitcher into a tiny glass. Children are particularly responsive to the daintiness with which food is served. This is a fact which is often not recognized. Investigation has shown in large numbers of instances that children go without breakfast simply because it is not served in an appetizing manner, therefore, where it is necessary to stimulate the appetite, the importance of presenting the food in an attractive manner must not be overlooked.

#### *THE CHILD WHO WILL NOT EAT*

One of the most difficult problems that confront the mother is that of the child who refuses to eat various kinds of food. Such a child may be finicky and eat only certain things. Usually there is no appetite at meal times. The child will absolutely refuse some kinds of food and occasionally will drink nothing but milk, or, on the other hand, it may refuse milk entirely. There may be an appetite between meals but not at meal times. Such children have to be coaxed continually and tempted to eat by means of bribes and presents. Sometimes these children seem to be well nourished; at other times their bad food habits react upon their health

to such a degree that they are markedly undernourished.

Cases of lack of appetite or refusal to eat certain kinds of food are more apt to be found among the families of the well-to-do than among those who are poor. Children who are pampered, over-cared-for and over-indulged frequently suffer seriously from under-nourishment simply because their food habits are bad, whereas children whose appetites and tastes have not been so constantly catered to will frequently get the best value from their food, even though the food itself may not be all that could be desired.

### *Causes of Lack of Appetite, and Results*

Lack of appetite may be caused by the onset of acute illness and is common throughout any illness, particularly one that is accompanied by a rise in temperature. Such loss of appetite, however, is almost always sudden in occurrence and the cause is known within a day or two. A more chronic lack of appetite may be caused by a continued state of poor health or as a result of poor sanitary surroundings and lack of personal hygiene. Children who live in rooms without proper ventilation, who do not play enough outdoors or get wholesome exercise, almost always have a poor appetite.

Loss of appetite may be caused by some definite physical defects, such as the presence of adenoids or enlarged tonsils. Chronic constipation is a common cause, while decayed teeth and aching teeth will not only make a child timid about eating but will cause it to swallow its food without proper chewing. This leads to indigestion and consequent lack of a desire for food. Too-long-continued reliance upon milk as the chief article of food and too much milk in the day's diet are common causes of lack of appetite for other foods. The great majority of cases where children are finicky about their food or refuse to eat are simply the results of bad food habits, bad training or over-indulgence.

#### *Types of Poor Appetite*

Generally speaking, any normal child should be able to eat any kind of food. There are certain exceptions to this general rule, however. Some children may have an extreme distaste for one or another kind of food, and when it is evident that the child refuses to eat because of an active dislike, the use of this food should not be urged. Marked cases of food idiosyncrasy which have been referred to elsewhere should also be sufficient reason for avoiding the particular kinds of food which produce the symptoms. In gen-

eral, however, the ordinary type of lack of appetite or objection to certain kinds of food is where the child will not eat any breakfast but becomes hungry in the middle of the forenoon and is given something to satisfy its appetite. At meal times the child will almost invariably refuse some kinds of food and sometimes will refuse to eat at all.

### *Management of Loss of Appetite*

Milk feeding should not be continued beyond the normal weaning age of nine months, except upon the special advice of the physician in attendance. After nine months the child should have less milk, and other foods should be added to its dietary. If the milk feeding is continued beyond this time the child may learn to depend upon it and this fact, combined with the excessive amount of milk taken, will drive away appetite for other food. Improper hygienic surroundings must be corrected and the child's personal hygiene outlined carefully. Physical defects must be corrected and care taken to see that the bowels function regularly. If, after all these matters have been attended to, the child still refuses to eat properly, it is probable that the difficulty lies in bad feeding habits. The real problem mothers have to meet, therefore, is that of the finicky child who will not eat

plain, nourishing food, craves sweets and requires to have its appetite stimulated. Such children commonly eat between meals and have candy when they desire it. The question of how to bring such children back to the normal routine of life is not a medical one but depends upon the right kind of mother and her firmness of purpose.

The first thing to be done is to establish proper feeding habits. The mother must fix firmly in her mind the fact that she must not waver in her purpose for one moment, that if she truly and honestly desires her child to be fed properly, she must persist until she has accomplished her object. There is absolutely no danger for the ordinary child who is not ill if it goes without food for from twenty-four to forty-eight hours, and, furthermore, every mother should remember that appetite is a normal condition and the child will eat as soon as it becomes hungry.

First of all, the meals must be regular. In the morning the child should have a wholesome, plain breakfast set before it. There should be no coaxing to eat; in fact, the best method is to have the whole family deliberately ignore the child and pay no attention to whether it is eating or not. If it refuses its food, that fact should cause no comment. During the morning, however, when the child

asks for extra food, it must be refused and the child should have nothing to eat until the noonday meal. At that time a simple dinner should be served. If the child still refuses to eat, no further notice should be taken of the matter, and at supper time the same routine should be followed. If the child goes without food altogether during the first day, there is hardly a chance in the world that it will refuse it the second day, and usually one twenty-four or forty-eight hour period is all that is necessary to make a success of the plan, but there must be no letting down of the bars afterwards. Once the habit of three regular meals a day has been established as the proper basis, nothing should be permitted to interfere with this routine.

The rules for teaching children to eat are simple, but must be adhered to absolutely:

- 1st: The meals must be attractive. A child should not be asked to sit down to a slovenly table or a badly prepared meal.
- 2nd: The meals must be regular. Breakfast, dinner and supper must be at exactly the same time each day. If this is impossible for the rest of the family, it should be made possible for the child.
- 3rd: The food that the child ought to eat should be placed before it. There should be no comment whatever upon whether or not it is eaten.
- 4th: There must be no eating between meals.
- 5th: Candy should not be allowed except as a dessert after the principal meal of the day.
- 6th: The food should be varied. Children dislike monotony in food even more than adults do.

- 7th: The child should not be required to eat any food that it actually dislikes, but before this is determined upon, a trial should be made.
- 8th: A child should not be allowed to eat food that makes it ill.
- 9th: From two to six years of age, one and a half pints of milk a day is sufficient. Part of this should be given plain and part in the form of cocoa, milk soups, custards, ice cream, junkets or cooked with vegetables.
- 10th: The mother must remember that upon her, not upon the child, depends the success or failure of the effort to establish proper food habits, and she must remember, first, last and all the time that if the cause of the loss of appetite is ill-health, the condition must be treated, but if the child is in normal health it will make no difference if it goes without food for one or two days, and that as soon as it is hungry, nature will assert itself, and the child will eat.

## CHAPTER V

### MALNUTRITION

Malnutrition is the most serious underlying cause of disease. It results in lack of resistance in the individual. Undernourished children are particularly susceptible to infection. Because the lack of resistance predisposes to disease and because disease frequently results in lowered vitality, it is sometimes difficult to discover whether the malnutrition is the underlying cause of the disease or whether the disease is direct cause of the malnutrition. It is necessary for children to be well nourished if they are to resist disease and grow up with a normal physique.

Malnutrition in childhood is alarmingly widespread. Statistics show that from twenty to twenty-five per cent of all children in the United States, not only in the cities but in the rural districts as well, are seriously undernourished. Its occurrence in childhood and during the period of growth interferes with the proper development of the body and the bodily organs and this retarded development makes such a lasting impression upon the child's whole physique that it is rare that full health is regained in later life. (See illustration opposite page 183.)

### *Causes*

It is a popular impression that malnutrition is caused by lack of food. There is a difference between chronic undernourishment and starvation. While lack of food undoubtedly will cause a type of undernourishment, the common cause is not insufficient food as much as it is the wrong kind of food, and irregular feeding. Therefore, undernourishment is found among the rich as well as among the poor, for there is little difference in the results between the pampered, over-indulged child of well-to-do parents who is fed largely on the wrong kind of food, such as sweets and pastries, and the poor child who cannot get the proper food to eat and who buys cheap candies and inferior ice cream with the few pennies at its disposal.

While wrong feeding is the basis of a large number of cases of malnutrition, the fact must not be overlooked that undernourishment in childhood may result from undernourishment in infancy, due to lack of proper prenatal care or to the acute digestive diseases during the first year of life. Malnutrition is due also to insanitary surroundings, improper home environment and disregard of personal hygiene. Lack of ventilation in sleeping rooms and too much play indoors will result not only

in lack of appetite but also in definite disturbance of the nutrition of the body. Insufficient rest, interrupted or too short sleeping hours, late bedtime, nervous excitement, evenings spent in close, ill-ventilated rooms watching exciting moving picture shows, and over-fatigue of any type are direct causes of malnutrition. Physical defects of all kinds will interfere with the proper nourishment of the body, the most prominent of these being adenoids, enlarged tonsils, defective vision and decayed teeth.

### *Symptoms*

The most common method of detecting malnutrition is by determining the rate of growth of the child and the relation of its weight to its height. The principle is generally accepted that any child who is ten per cent below the normal average weight for its height is undernourished. However, owing to certain racial and family characteristics, this is not always a true test, consequently other symptoms have to be looked for and are readily observable.

The undernourished child has a characteristic appearance. Usually the face has a drawn, tired expression. There are apt to be dark circles under the eyes, the skin may be pale or of a dusky color, the child's whole

body droops, the shoulders are pushed forward, chest sunken, and the shoulder blades in the back are apt to protrude. There may or may not be some curvature of the spine, but usually, in standing, the child throws most of its weight on one foot, so that it leans to one side. Almost always there is bad posture with prominent abdomen and what is known as a "slouchy" attitude. The muscles are soft and flabby, while the hair usually loses its lustre and is dry and brittle. Other symptoms which have to do with the condition of the child may be observed readily. Frequently there is excessive nervousness, with disturbed sleep. There may be twitching of the muscles. The appetite is apt to be diminished, and the child shows marked preference for particular types of food, refusing all others. Undernourished children rarely show any marked vitality. They act as if they were nervously exhausted, do not want to play and are unwilling to make any effort. There is a marked amount of lassitude and fatigue. Any action requires an amount of initiative they are unable to summon. Such children are constantly subject to disease, particularly those of an infectious nature.

*Care and Treatment*

In order to have effective treatment, it is necessary to interest the child in its own progress. In school children this can be done by means of competition between the various members of the class, to see which will progress most rapidly in weight and general health. With children of preschool age, competition is not so easy to bring about, but even with very young children the sense of personal pride may be brought out in many instances. Each child should have its height measured at least twice a year and should be weighed each month. A personal weight chart, similar to the one illustrated elsewhere in this book, should be used to make an individual record of each case. Progress is the thing to be desired, therefore, the weight curve must have an upward tendency. Any loss of weight or stationary weight for a period longer than one month shows that the type of care given is not suitable.

All insanitary conditions must be eliminated and careful attention paid to the personal hygiene of the child. Many cases of malnutrition have been cured by having the child sleep outdoors or in a room with the windows wide open. Other cases have responded immediately to a course of treatment which in-

cluded a midday nap or enforced rest for at least two hours a day. Play may have to be restricted to a great extent, particularly if the child is over-active and emotional, and throws itself with all of its energy into every game. Physical defects found to exist must be corrected. Late hours and attendance at the movies must be avoided. The child should have from ten to twelve hours sleep at night and two hours rest in the daytime. Meals must be regular and consist of plain, wholesome food. Feeding between meals is not essential unless the child is not gaining. Then an additional meal of crackers and milk or cocoa may be given in the middle of the forenoon or afternoon and again at night, but this should not be allowed to take the place of the regular meals, and if it interferes with a proper appetite at mealtimes, it should be discontinued. Occasionally, undernourished children may have the full value of their food more apparent if they are given five small, regular meals a day rather than three hearty ones.

There should be a rest period of a half to one hour after each meal during which time the child should lie down out-of-doors or in a well ventilated room, and remain perfectly quiet. Sweets between meals should be forbidden. There is no harm in the sweets

themselves; the difficulty is that they usually take away the child's small appetite and make it impossible for it to eat the nourishing diet it needs. Plain candy may be given after meals, but not at any other time. In the dietary, emphasis should be placed upon a full pint and a half of milk a day, plenty of cereals, fresh vegetables, particularly the leafy types, and fruits. Children of preschool age should never, under any circumstances, be allowed to drink either coffee or tea. This is particularly true in regard to the undernourished child.

There is another class of undernourished children that does not respond to any of these types of care. Usually, detailed study will show that the difficulty is with the emotional life of the child. There are instances where children are undernourished, pale and lacking in proper development and the cause is simply the excessive nervous reaction of the child to a disorganized family life. Parental neglect, family discord and an unhappy environment result inevitably in worry and unhappiness to children. Even without harsh punishments, the child can suffer intensely from a sense of general lack of harmony in its environment. Such children are shy and introspective, and inevitably become undernourished. Removal of such a child to a proper environment will result at once in marked improvement.

The proper way to deal with malnutrition, therefore, is first to find the cause, that is, the place where the child's life is departing from the normal, and then to do everything possible to remove the discordant or improper environment or factors and place the child in a position where it may lead a normal, wholesome life.

## CHAPTER VI

### THE NERVOUS CHILD

Prevention and care of nervous diseases occurring during childhood are important for two reasons: First, because the nervous child suffers intensely from its affliction and second, because nearly every type of nervousness in adult life can be traced to its beginning in childhood. Anyone who has suffered from a nervous disorder knows that such a handicap stands in the way of normal mental and physical development and that it is likely to make life almost unbearable at times. Much of this suffering during adult life is unnecessary and can be prevented in childhood. Also, the methods of correcting nervousness after it has been established are much more simple and effective in early life than they are later.

The nervous system of a child is exceedingly complex. It is unstable and easily affected. Prevention of nervous disorders in childhood really begins during the prenatal period, for if the expectant mother is neglected and poorly nourished during the months before the baby comes, the probabilities are that the child will suffer from lack of vitality and that it will be affected by nervous and emotional disorders. This is one of the reasons why proper prenatal care is so essential.

*Causes*

The causes of nervousness generally may be traced to the period of earliest infancy. Few young babies are naturally nervous, and almost always the trouble is with the parents. Fathers and mothers who are nervous, irritable, over-anxious, over-indulgent or subject to outbursts of temper or irritability, will nearly always have nervous children. Even in earliest infancy, the baby is extremely susceptible to its environment. If the father, mother, nurse or any other member of the family who comes into intimate, daily contact with the baby, is nervous and temperamentally highstrung, the condition will react upon the child.

The causes of nervousness in infancy as well as in early childhood are either physical or emotional. The physical causes are mainly indigestion, anemia or malnutrition. After the child is over two years of age, other physical causes such as defective eyesight, with resultant eyestrain, adenoid growth and impacted or decayed and painful teeth, may be considered predisposing causes. The emotional causes, however, seem to be the more important. Even before they are able to express themselves, children are extremely sensitive to emotional reactions. Sudden

fright and unexpected noises, being awakened suddenly, violent jouncing up and down, or being danced about, too little sleep, late bed-time, over-handling and over-fatigue, all lay the foundation for nervous disorders. Lack of understanding of the child and consequent nagging and arbitrary rules tend toward the formation of the habit of self-suppression in early life, and to emotional outbursts later.

Children are essentially imaginative beings. They live in a world of their own. Their fears, sorrows and disappointments are far more keenly felt and more real than any we know in adult life. The child lives in the present, while the adult has the future in view, therefore any lack of understanding of the child's fears, or, what is far more criminal, the cultivation of such fears, often has serious and far-reaching effects upon the child's whole life. Parents are to blame if they suppress the child's natural instincts. Particular emphasis should be placed upon fear as a cause of nervousness in later life. Many cases of nervousness have their starting point in a sudden fright or in a story told to frighten a child. The harm that may be done by threatening a child that some terrible thing will happen to it is almost beyond comprehension. In the case of the more serious nervous diseases, definite causes can be traced, and

these will be considered later, but in the case of the ordinary functional nervous disorders, or what is commonly called "nervousness," it is deplorably true that the fault is usually with the child's surroundings rather than with the child itself. Fathers and mothers must realize that it is largely within their power to determine whether or not a child will be nervous or calm and well-poised.

### *Symptoms of Nervousness*

The symptoms of nervousness in children or in adults are many and varied, and not all of them occur in each instance. Each case must be judged by itself. In general, however, there are two main types of the nervous child to be considered, but it must be remembered that symptoms of both types may occur in the same child. The first type is that of the over-excitable child. Such a child may be robust and well nourished, or it may be anemic and show signs of undernourishment. The most predominant symptoms are those which have to do with the emotional side of life. Such children are excitable and given to sudden fits of anger or temper. They are extremely irritable and have frequent outbursts of loud, shrieking laughter. There is a constant hunger for excitement. In their play they are apt to be quarrelsome and dicta-

torial and always want to assume leadership. Such children are apt to hold themselves with muscles rigid. They are over-anxious for praise and will do almost anything to gain it. They cannot stand blame. Sometimes they have a tendency to be cruel, especially to animals, and they may be very deceitful.

The second type is that of the shy, emotional child. This type shuns people and does not want to play or associate with other children. They are easily startled or shocked by any sudden noise. They may be morose and eccentric in their behavior. Sleep is often disturbed. Such children may be peevish and irritable, but usually their predominating symptoms are those of over-shyness. They are apt to hesitate and find it difficult to adjust themselves to their environment. They do not care to play with other children, and often are either afraid or unable to recite in school. Such children usually lack decision, and they are rarely, if ever, able to decide what they want to do or to take any definite action. Usually their fear is extreme. They distrust themselves and are abnormally afraid of the dark and of animals. They find difficulty in getting to sleep at night, and do not want to sleep alone. The shy, reserved child has day dreams, preferring to be by itself and indulge its imagination. Such children rarely

tell the results of these day dreams or the things they think about. We all have encountered the nervous child who constantly makes up long stories about occurrences that never have happened, but which, nevertheless, are very real to the child.

Nervous children may be either bright or dull. The excitable type is apt to be overprecocious. Frequently they are extremely brilliant along certain lines, and it is not unusual to have such children considered as "prodigies." Parents constantly put them forward so that they may show off their brilliancy. However, their powers of endurance are poor and while they may readily excel in some one direction, they are rarely able to excel on all points. They put into their play or other activities every particle of strength they have, holding nothing in reserve.

### *Prevention and Treatment*

Prevention of nervousness should begin in the prenatal period. Even when the baby is born in normal, healthy condition, however, there should be no relaxation of preventive measures, and they must be continued throughout infancy. Mothers must realize how fragile and unstable the baby's nervous system is. The ordinary noises of the house need not be stilled; in fact, it is much better

to have the baby grow accustomed to normal noises from the beginning. Sudden fright and unexpected noises or sudden awakening of the baby by means of unusual sounds or movements to attract its attention are extremely harmful. The habit of dancing babies up and down and awakening them from sound sleep for any purpose other than feeding, must be avoided. The proper routine of the child's life is essential as a preventive of nervousness. The hours of sleep and regularity of the daily routine are immensely important in this regard. Over-handling should be avoided. All possible physical causes of nervousness must be removed. In little babies, improving the nutrition and preventing the occurrence of physical defects by means of fresh air and general hygiene are of importance and these measures must be continued as the child grows older. Eyestrain, decayed teeth and adenoid growths should not be allowed to develop. Sometimes worms are an exciting cause, although it is usually easy to determine this point as the nervousness lasts only as long as the worms are present.

If possible, nervous children should sleep outdoors. At all events, they should be in the fresh air as much as possible. Rest is particularly important. The nervous child should have not only its full number of hours of rest at

night, but should be required to take at least one nap during the daytime. Normal exercise should be encouraged, but over-stimulating and over-exciting play is harmful. It should be unnecessary to state that a child under six years of age should not be taken to the movies. The influence of moving picture shows on children may be of two kinds—the physical effects of late hours, bad air and overcrowding are obvious. In addition, the emotional effects must be considered. While some of the moving pictures have much to commend them and are adapted for children, the vast majority are unsuited for the young, impressionable child. When the over-stimulation of the emotions is added to the late hours and bad environment, there can be no question whatever that the child under six years of age should not be allowed to see the general type of moving pictures or to be in any place where such pictures are shown. Late hours must be avoided in any case.

Mothers and fathers must learn that they have much to be responsible for in the production of nervousness in their children. The child with a normal nervous system and calm, well-poised attitude toward life, reflects its home environment. The child should never be nagged. Harsh and arbitrary rules simply

incite resentment in the child. If its emotions are not expressed at the time, they are felt nevertheless and when they are suppressed they are apt to be much more destructive to the child's future well-being than if they resulted at the moment in outbursts of temper or in obstinacy and refusal to obey the orders or commands given.

The question of preventing nervousness is strongly allied to the whole matter of discipline during childhood. Two things must be remembered: first, that the nervous system of the young child is very unstable; and, second, that all children are imaginative. The over-excitable child needs a particularly calm environment and wise direction of its exuberance and activity along proper lines. The imagination of such children should never be suppressed or laughed at. They should never be accused of lying or trying to deceive when they are simply expressing a "flight of fancy." It is not difficult to distinguish between a direct lie and a "flight of fancy." When the child comes running in and says that it has met a great big bear on the road, there is no intention to deceive, for to the child's imagination some little dog has assumed the aspect of a bear and the story the child tells is very real and vivid to it. Such a child should have the truth explained but this

should be done in a tactful way that will not create antagonism. Children's fancies are only too easily suppressed and the tendency to mold all children into a common type, and to suppress their instincts and imagination and self-expression, results not only in much unhappiness to the child at the time but often in distinct loss of the power of expression that it might be able to display in later life.

Play should not be boisterous or quarrelsome. It should be properly directed and should have a result. Children like to do things with their hands, and constructive play can be arranged just as easily as the destructive kind. Children love competitive games for this reason. They like to play ball or to make mud pies or play house or do anything of that kind that appeals to their imagination and has a result. Aimless play or play with toys that are already made and that require no aid from the child is unsatisfactory and may even be harmful. Children should be taught to make their own toys and to be satisfied with the simplest equipment possible. Over-indulgence is responsible for far more nervousness than lack of indulgence in this respect. The child who is always forced to provide its own amusements and to make its own playthings in all probability will have a far finer nervous temperament and be better

able to meet the world on its own terms than the child who has had everything done for it, and who has never had an opportunity to exercise its constructive ability. Creative imagination in children should be encouraged. If it is not allowed its normal outlet, it may result in much harm and lead the natural impulses to take the form of introspection, shyness and the breaking down of character, so that the child becomes indecisive and morbid.

*Nervous children should never be punished*, and rarely, if ever, should they be blamed. If they have been taught to fear anything, every effort should be made to reason with them calmly and to explain that the thing or occurrence they fear should not be feared. Children are susceptible to reason at an unusually early age. There should be no arbitrary "do's" and "don'ts," but as soon as the child is old enough to talk, it has a right to know why it is required to do certain things. On the other hand, there must be no wavering or lack of firmness on the part of the parents. Once the child has been told to do a certain thing and the reason therefor has been explained, instant obedience must be expected, but nothing unusual or arbitrary should be asked for, nor should the child be required to do things merely to vent the displeasure or temper of the parents. The tasks that are

given the child to do should fit its capacity. The relation of the parents to the child should be one with the definite object of cultivating its self-reliance and making it a responsible, intelligent human being. This cannot be done if the father and mother continue to make the child feel its dependence. Every new human being has a distinct right to a life of its own, and while the early years of that life must necessarily be dependent upon someone else for guidance, the object of that guidance should not be to make the dependence continue but rather to build up in the child the ability to make its own decisions, to tell the difference between right and wrong, be prepared to take a proper attitude toward life, respect the rights of others and to be able to adjust itself to its environment in later life. Inability to get on with people or to meet events as they occur during life is probably the cause of more real unhappiness than any other thing that can occur to us.

While emphasis has been laid on the harmfulness of nagging, punishment and arbitrary action, it must not be forgotten that almost equal harm may be done by over-indulgence. The spoiled, pampered child is not only apt to be extremely nervous but usually is unable to adjust itself to its environment and may lead a life of great unhappiness. The over-

indulged child is far more apt to become the neurotic of later life than the child who has had difficulties to overcome.

Neurasthenia, nervous breakdown, hysterical attacks and the lack of self-confidence that leads to inability to get on in the world nearly always are the result of wrong training during early child life.

#### *CHOREA (ST. VITUS DANCE)*

Chorea is not commonly found in children under five years of age. Usually it is associated with the early years of school life and there has been an impression that the nervous strain of school life is one of the predisposing causes. Probably this is true in part, nevertheless it is unlikely that a child who is perfectly normal on entering school will develop so severe a nervous condition simply as a result of school routine or school pressure. As the basis of all nervous diseases is laid in early life, we must consider that the main predisposing causes of chorea occur during the preschool age.

#### *Causes*

Chorea may be due to a variety of causes. Sometimes it is exceedingly difficult to trace any one thing that may be considered the main predisposing factor. In general, however, prolonged nervous fatigue or over-ex-

citement during the first few years of life, long continued undernourishment with anemia and chronic intestinal indigestion, are the common predisposing causes. The possibility of chorea being a manifestation of rheumatism must not be overlooked.

### *Symptoms*

The symptoms of chorea are quite characteristic, and once seen, they are not easily forgotten. Usually they begin with a marked amount of restlessness, the child is unable to sit still, there is constant shuffling of the feet in walking about, and it is impossible to co-ordinate the muscles or guide the hands and feet in the right direction. There is marked inability to control the movements of the arms or legs. The child may reach for an article on the table but the hand will not touch the article but will grope around before the child can make it grasp the thing that is sought. Children will often knock things off the table when trying to grasp them. The movements seem to be extraordinarily clumsy and the child is quite unable to control them. There is apt to be marked twitching of the face, and occasionally grinding of the teeth. The head jerks convulsively from side to side and sometimes the whole body will move with a series of loose, more or less convulsive gestures.

The constant motion of every part of the body, with the twitching, jerking and uncoordinated muscular efforts, is characteristic of chorea. There are, in addition, certain emotional disturbances. The child usually manifests marked irritability of temper, is unable to control its emotions and will laugh or shriek loudly and have outbursts of crying when there is little or no cause.

### *Prevention*

Prevention of chorea consists in prevention of nervous diseases in general. The child should be kept in as good physical condition as possible, and if there is the slightest tendency toward nervousness, the hygienic surroundings must be of the best. Such children should not be sent to school at an early age but should be supervised carefully until all emotional strain is relieved before being allowed to engage in competitive effort in school work with other children. Physical defects should be remedied, if they are present, and every effort made to build up the child's nutrition. Normal, wholesome but limited exercise, with plenty of fresh air and sleep, is essential.

### *Treatment*

When this disease has already occurred, the best treatment is to put the child to bed and

keep it as quiet as possible. Medical care is essential, owing to the possible effect that chorea may have upon the heart, also for the prompt cure of the disease itself. The doctor should be summoned without delay, therefore, if any unusual twitching or convulsive movements are noticed in the child.

#### *HABIT SPASM*

Habit spasms have a certain resemblance to chorea, as far as the symptoms are concerned. The characteristic difference that may be noted, however, is that in habit spasms the convulsive movements are always around the face, tongue or head, that is, they are above the neck, while in chorea the entire body is involved.

#### *Causes*

Habit spasms usually occur in nervous children. There is no definite organic cause, but they are more apt to occur in children who are undernourished and who are suffering from some form of physical defect. They are more common among children of school age because they are in a sense a form of imitation. If one child in a class-room is affected, within a short time a large number of others will begin to have similar convulsive movements of the head, face and neck.

*Symptoms*

The child will make sudden grimaces, twitching the mouth, closing the eyes, with a pronounced frown, show the teeth, jerk the head from side to side and there may even be twitching of the individual muscles of the face.

*Prevention*

Prevention of habit spasms consists in maintenance of good health in the child and removing all causes of nervous diseases.

*Treatment*

Children found to have habit spasms should be kept entirely isolated so that imitation of the condition may not be taken up by other children. Complete rest and the establishment of normal habits are necessary. The disease, may tend to become chronic and if the condition persists medical advice should be obtained.

## CHAPTER VII

# COMMON DISEASES OF CHILDHOOD

### *COUGHS AND COLDS*

Colds are one of the commonest ills of childhood. They range in severity from the simple running of the nose, with perhaps slight congestion of the eyes, to a condition known as "bronchitis," where there is a great deal of constitutional disturbance, a cough and the presence of fever. It is always possible for a slight cold to become a more severe one; therefore a cold, however simple it may seem to be, should never be neglected. Some children seem to have a predisposition to colds, and from fall until spring are scarcely ever free from excessive discharge of mucus from the nose. While the treatment of colds is of great importance, their prevention is more so, and everything possible should be done to see that the child is put in such healthy condition and lives in such a normal manner that it will not "take cold."

#### *Causes*

Anything that lowers bodily resistance or vitality predisposes to disease, and children who are not robust are the ones who fall easiest victims. Such children are easily

weakened by attacks of colds and bronchitis, and as a result they seem less healthy. In fact, it is sometimes difficult to tell whether the colds are the cause of the lowered vitality of the child or the lowered vitality is the cause of the colds. Such a vicious circle must be broken into and the best way is to begin to fortify the child during babyhood.

### *Prevention*

Unless the child reacts well, cold baths are not advisable, but at the age of one year it is good practice to give a quick, cold sponge over the neck and shoulders of the child immediately after the warm bath. The cold bathing of the neck and shoulders must be practiced every morning and should be continued not only throughout childhood, but as a permanent habit. It is one of the best preventives of cold that we know.

Proper feeding also is a safeguard against colds, as it is against all diseases. The clothing of children will be considered in another chapter, but may be mentioned here as it has a distinct bearing upon the production of colds. Probably there is no class of children who "take cold" more readily than those who are habitually overclothed. After they have been playing in warm rooms, or even outdoors, and have become superheated, they sit down to

cool off, with resultant chill to the body. It is probable that an excessive amount of clothing causes more illness than too little clothing, although a child who is habitually cold because of insufficient clothing and who always has cold hands and blue lips needs equally vigorous attention. The happy mean lies in dressing children when indoors in winter in the same weight clothing they wear in mild summer weather. When outdoors, the difference should be made up by the thickness of the outer wraps. Wool underclothing, by inducing perspiration, is not as healthful as cotton or a mixture of cotton and wool or silk and wool.

Overheated and badly ventilated rooms are also productive of colds. Fresh air and good ventilation are the best preventives. While certain types of head colds are due merely to congestion, others are due to direct infection and for this reason a person suffering from cold should not come into intimate contact with other people, particularly children. A child should never use a pocket handkerchief belonging to anyone else, and everyone, during the act of coughing or sneezing, should hold a pocket handkerchief over the mouth. The infection is probably carried in little droplets that come from the mouth during the act of coughing or sneezing. If

anyone happens to be near enough, the breathing in of these particles may cause a cold. They do not, however, float in the air unless it is in the dust. For this reason children, particularly very young ones, should not be taken outdoors on very windy or dusty days, nor should they be permitted to remain in rooms that are being swept or dusted. This is one of the reasons why the child's room should not have a carpet, but rather rugs that may be taken out easily, and a hardwood floor that may be kept clean. Other common means of "taking cold" are sitting in drafts, playing on the floor in a room that is not properly heated, wearing wet stockings or shoes and sudden changes in temperature without corresponding changes in clothing.

### *Treatment of Colds*

If a cold does occur, there are various methods of treating it which will probably give relief and which will usually stop it within a short time. First of all, the child should be given a good cathartic, preferably a tablespoonful of castor oil. For a day or two the diet should be light and readily digestible, consisting of milk, cocoa, cereals, custards, milk toast, eggs and well-baked white potatoes. If the child is very hungry, additional food in the shape of vegetables may be added.

If there is a tendency toward a cough, the neck and chest may be rubbed well twice a day with camphorated oil. The rubbing is really the valuable part of this treatment and should be carried on until the skin shows a healthy glow. If there is any distinct cough, with rise in temperature above one hundred degrees, a mustard plaster or flaxseed poultice should be placed on the chest. If the nose is stopped up, a little white vaseline inserted gently into the nostrils will give some relief. Nasal sprays or douches should not be given by anyone who is not thoroughly trained, as much harm may be done when they are given carelessly.

One of the quickest means of relief for any obstinate cough, or in cases where the child has lost its voice because of congestion of the larynx, is the use of the so-called "croup kettle." If one is not available, an excellent substitute may be made by taking an ordinary pitcher, filling it with boiling water, and putting into it compound tincture of benzoin in the proportion of one teaspoonful to a pint of water. Then a towel should be placed over the top of the pitcher, leaving a small opening at the lip. The child should be instructed to breathe deeply of this steam while the pitcher is held close to its face. The best time for this steaming is while the child is in bed,

wrapped up warmly, and later exposure to change of temperature should be avoided.

One of the simplest medicines that may be used is brown mixture, which may be bought at any drug store. It can be given in half-teaspoonful doses every three hours to a child of one year, and in teaspoonful doses every three hours to a child of six years.

If the simple measures outlined here do not suffice, or if there is any rise in temperature above one hundred degrees, a physician should be called.

If a cold tends to become chronic, it is probable that there is some local congestion or irritation in the nose or throat, and an examination should be made by a physician to determine if there are adenoids or enlarged tonsils present. Each case should be judged individually but if the adenoids or enlarged tonsils are interfering with respiration, or if, in the opinion of the physician, they are the cause of the chronic colds, their removal is advised.

#### *CROUP*

Croup is an acute spasm of the larynx, accompanied by a harsh, brassy cough, noisy and difficult breathing, and occasionally by signs of partial suffocation. It is not common in young babies, rarely appearing before six

months of age. The vast majority of cases occur when the child is from three to six years of age. There seems to exist in some children a predisposition to croup, which may be a family trait. If there is one attack, there are apt to be others. Sometimes the attacks occur three or four nights in succession; again, there may be a long interval between them.

### *Cause*

The immediate exciting cause of croup seems to be exposure to cold or some form of indigestion. Large adenoids and hypertrophied tonsils are often predisposing causes.

### *Symptoms*

During the day the child may exhibit some slight difficulty in breathing and older children may have a hoarse, rather hollow and barking cough. This becomes increasingly worse toward evening, although the child may finally go to sleep. The attack itself generally comes on about midnight. The child awakens suddenly, shows great difficulty in breathing, with loud, noisy inspirations, a characteristic sound which, once heard, is rarely forgotten. The child appears to be in great distress. The lips may be blue and sometimes there seems to be imminent danger of suffocation. The pulse is rapid; occasion-

ally there is slight fever, although the temperature rarely goes above one hundred two degrees. Sometimes the child is quite prostrated, but it must be remembered that this disease is never fatal, although it is always alarming. After the attack subsides, the child usually falls into a refreshing sleep and seems quite well again the next day. There may be recurrent attacks of croup for two or three nights in succession, then they may stop for weeks, or even months.

### *Prevention*

A child with a tendency to croup should be kept in the open air as much as possible. If it can be accustomed to cold bathing, so much the better. In any event, the neck and chest should be sponged with cold water night and morning. If adenoids and enlarged tonsils are present, their removal is advised. As digestive disturbances often cause croup, care must be taken to see that all food the child eats is readily digestible. In infants, too rich milk or too frequent feeding may be the cause, and the feeding interval should be lengthened and the milk diluted. For older children, tonic treatment may be necessary.

*Treatment*

When an attack occurs, the best remedy is syrup of ipecac. This may be given in doses of thirty drops every fifteen minutes for a baby from six months to a year old, and one-half to one teaspoonful every ten to fifteen minutes for a child of two years. The doses should be repeated until vomiting occurs. If vomiting does not occur after two or three doses, the child should be given a teaspoonful of white vaseline or two teaspoonfuls of goose grease. Hot flaxseed poultices or hot fomentations should be placed around the child's neck. If there is much difficulty in breathing a croup kettle should be used. If a regular croup kettle is not available, an ordinary tea kettle may be made to serve the purpose. It should be two-thirds full of water, which must be boiling vigorously when the kettle is taken from the stove. It should then be placed on a chair close to the bed, and a canopy arranged over the bed. This may be done by raising an umbrella and draping sheets over it so that the child is under a tent. The spout of the kettle is then inserted through an opening in the sheet and the child allowed to breathe the moist and steaming air. Such treatment as this usually loosens the cough and if vomiting occurs it almost invariably

relieves the spasm. If the attack recurs during the night, the treatment must be repeated. The next day the child should be kept in bed and it is advisable to give the syrup of ipecac in five-drop doses every two hours during the daytime in order to relax the spasm of the larynx.

#### *ENLARGED GLANDS*

Enlarged glands, usually located in the neck, are fairly common in childhood, particularly in undernourished children and in those who are suffering from some degree of infection. The terms "strumous" and "scrofulous" were formerly used to describe such a condition, but they have very little meaning in themselves and it is more exact to consider the real causes which lead up to the presence of enlarged glands.

The glands of the neck are situated mainly in three localities: a row of them follows the front boundary of the large muscle of the neck. These are known as the *anterior cervical glands*. Another row, which follows the posterior boundary of the large muscle of the neck, are known as the *posterior cervical glands*, while directly beneath the jaw there are numerous glands which are known as the *submaxillary* or *sublingual* glands. Ordinarily, these glands cannot be felt. When any

infection occurs, particularly through the mouth, the glands in the neck are apt to absorb some of the infectious material and become inflamed and enlarged.

### *Symptoms*

The glands increase in size so that they can be felt readily as small, hard nodules just beneath the skin. If they are simply inflamed, they will be painful to the touch as well as swollen. This inflammation, however, may go on to the point where pus forms, in which case the skin over the gland becomes slightly discolored, and if left untreated the pus in the gland burrows through the skin, usually appearing on the outside of the neck. In some instances the pus burrows toward the inside and the opening may be in the child's throat.

### *Cause*

Enlarged glands are usually due to the presence of some infection. They are commonly associated with decayed teeth. What is known as an ulcerated tooth, or the formation of a gum boil at the root of a tooth, frequently results in an enlarged and painful gland and occasionally in an infected gland which forms an abscess with pus and finally ruptures. In some infectious diseases the

glands enlarge, and they may occur in under-nourished or anemic children. Frequently, infection of a gland does not go beyond the point of making the gland swollen and tender, but occasionally they become acutely painful, much swollen and tend to "break down," that is, the contents become cheesy masses of pus.

### *Treatment*

When the cause of infected glands is bad teeth, the treatment is obvious. The teeth should be cared for properly, mouth hygiene should be practiced and necessary fillings and extractions should be made. Usually the glands will get entirely well as soon as the cause is removed. If the swollen glands are the result of an ulcerated tooth, treatment should be begun at once so that the pus from the tooth abscess will not burrow through and force an opening on the outside of the neck. When this happens, permanent scarring of the neck usually results.

Enlarged tonsils should be removed as a precautionary measure in the prevention of infected glands. If the glands are already inflamed, however, it is wiser to wait until the inflammation has subsided before having the tonsils taken out. The nutrition of the child should receive attention. The early home

treatment of inflamed glands is, first, to paint them with tincture of iodine. This may be repeated every two or three days, but should be stopped for a week or two if the skin becomes sore. The glands should not be rubbed or irritated in any way. If the inflammation is at all acute, application of an ice bag or cold compresses is advised. If the skin over the glands becomes red and much swollen, and if tenderness is present, it is probable that the glands will have to be opened. This should be done only by a physician. In order to determine the exact cause of enlarged glands and to secure proper treatment, the advice of a physician should be sought at the earliest possible opportunity.

#### *TONSILLITIS*

This is a general constitutional disturbance, with high fever, rapid pulse and a moderate amount of prostration. It may or may not be accompanied with pain in the back or limbs. The local symptoms are manifested by sore throat. Examination shows the tonsils reddened and inflamed, with small white patches appearing over their surface.

#### *Treatment*

Because tonsillitis may so closely resemble diphtheria, there should be no delay in ob-

taining medical advice when any child is ill with a sore throat. Before the doctor comes, however, it is advisable to give the child a dose of castor oil or calomel in doses of one-tenth of a grain every fifteen minutes for ten doses or until one grain in all has been taken. This should be followed by a saline cathartic. If the child is old enough to gargle, it may do so with a solution of one teaspoonful of salt to a glassful of hot water. Cold compresses or an icebag on the head often affords some relief. Medical treatment and local treatment of the throat can be prescribed only by a physician.

#### *EARACHE*

Earache is not at all uncommon during childhood. It is exceedingly difficult to diagnose, except in older children, as younger ones are rarely able to tell the location of the pain.

#### *Cause*

It is caused generally by repeated coughs or colds or the presence of adenoids. It commonly follows some of the infectious diseases, particularly scarlet fever. In such instances, we have an acute infection of the ear. Earache at any time may be an indication of more serious ear trouble, and therefore should receive medical attention at once.

*Symptoms*

Very young children appear quite ill, but for no marked reason. Usually there is a good deal of drowsiness but the sleep is restless, the child tossing about from side to side and constantly moving its head. Older children may put their hands up to the affected ear, thus indicating the seat of the pain. Younger children, however, rarely do this. A child who is old enough to talk will usually say that its head hurts or its ear aches. The pulse invariably is increased in frequency and the temperature may rise as high as one hundred five degrees Fahrenheit.

*Treatment*

The first step in the treatment of earache is relief of the pain and quieting the child's discomfort. Hot compresses are best. These usually give more relief if they are dry. One of the following may be used: a hot water bag, care being taken to see that it is not hot enough to burn the child, or a square, rather flat bag filled with salt and placed in the oven until thoroughly heated. If nothing else is available, a saucer may be heated in the oven, covered with cloth and placed at the side of the child's head. The ear should be irrigated with hot boric acid solution every

three hours. Usually the pain may be controlled fairly well in this way, but, owing to the serious results that may follow earache, a physician should be summoned and his advice followed from the beginning of the illness. The trouble in the ear may subside entirely or it may increase to the point where the eardrum is punctured. If this occurs there is almost immediate relief and a distinct fall in temperature. There may be a discharge from the ear, which tends to become chronic. In such cases the ear should be irrigated carefully with boric acid solution once each day so that it may be kept as clean as possible.

#### *HICCOUGHS*

Hiccoughs are a succession of spasms of the diaphragm and consist in more or less regular interruption to the rhythm of breathing, with a sharp, gulping sound occurring in place of the normal respiration. In young children hiccoughs may be persistent and alarming. Frequently the condition occurs without any appreciable cause and there may be repeated attacks. Sometimes the cause will be found to be a slight attack of indigestion. Not uncommonly it is a result of too rapid eating. Occasionally special articles of food, particu-

larly those that are highly seasoned, very hot or very cold, will excite an attack.

### *Treatment*

Treatment should be directed toward removal of the cause and prevention of the spasm. When the attack is caused by indigestion, the child may be given a quarter-teaspoonful of soda bicarbonate (baking soda) in a quarter-glassful of water or a teaspoonful of rhubarb and soda mixture diluted with one-quarter glassful of water. If any article of food is known to disagree with a child and to produce hiccoughs, its use should be avoided.

For the attack itself, effort should be directed toward holding the breath long enough to interrupt the spasm of the diaphragm. This may be done in older children by teaching them to inhale very slowly until the lungs are filled with air and then to hold the breath as long as they can, finally exhaling the air in an equally slow manner. Usually, one or two repetitions of this breathing exercise will stop the hiccoughs. The old idea of taking nine swallows of water without breathing has the same principle and is easily applicable to children who cannot be made to hold the breath in any other way.

### HEADACHE

Headache in young children may be a simple matter, due to some exciting cause, or it may be a symptom of a serious disease. If the headache does not respond to treatment within twelve hours, and if any other symptoms of illness, such as fever or increased pulse rate, arise during that time, it is probable that the headache is a symptom of more serious disease and the doctor should be summoned.

Simple headache in children may be due to a variety of causes, of which indigestion and chronic constipation are probably the most common. Playing too hard and too continuously, late hours with over-excitement, too frequent attendance at the movies, particularly at night, over-confinement in badly ventilated rooms, eyestrain of any kind, over-exertion in hot weather, nervous instability, impacted or decayed teeth, adenoids and nasal catarrh, are common causes.

#### *Symptoms*

The child usually complains of pain in its head. This may be localized in some one spot or the whole head may ache. Occasionally there will be pain on turning the head from side to side. Usually there is a good deal of prostration, the child is unwilling to

get up, does not want to play, objects to strong light and occasionally complains of nausea. There may or may not be vomiting. These symptoms vary in severity, ranging from simple pain in the head to complete prostration and what seems to be serious illness.

### *Prevention*

Prevention of headache consists in removing the underlying cause. This may be lack of ventilation in the sleeping room, too little outdoor play or lack of exercise. In some cases over-excitement, late hours and too frequent attendance at the movies, with the close air and constant eyestrain, must be guarded against. Particular attention should be paid to the digestion and to the condition of the bowels and special effort made to avoid constipation. If there is any question of eyestrain, the eyes should be examined by a competent oculist. If the child is subject to headache, the routine of its life must be outlined carefully. There should be sufficient sleep, plenty of outdoor play and a light, readily digestible diet.

### *Treatment*

Treatment will depend upon the cause, and usually it is easy for the observant mother to

know why a child has a headache. The general treatment consists in complete rest in a cool, dark room. Cold cloths or icebags should be applied to the head and the child should be given a cathartic, preferably castor oil. In some cases a hot foot bath will afford relief, and if indigestion or constipation is the cause, colon irrigations are frequently beneficial. Drugs should not be given, except under the doctor's orders. The only exceptions to this rule are soda bicarbonate or rhubarb and soda mixture, which will relieve the accompanying indigestion. The diet should be very light for at least twenty-four hours, consisting mainly of liquid foods.

#### *WORMS*

Intestinal worms found in children are of three kinds: tape worms, round worms and pin or thread worms. The latter is the only species found in babies. As the child grows older, pin worms are still the common type, although the round worm or tape worm may also occur. All these varieties develop in the intestines. It is not definitely known how they gain entrance into the body, but it is believed that the eggs from which they develop are found on food that has not been washed sufficiently or cooked before being eaten.

The tape worm usually occurs singly. It may be very long, ranging from fifteen to twenty-five feet. Generally it is about one-quarter to one-third of an inch in width, and resembles a long piece of tape, cut into segments or pieces from one-half to one inch long. These segments are joined together lightly. They pass off with the bowel movements separately or in small groups and are recognized easily by their white color, size and shape.

Round worms are white and closely resemble the common earth worm or angle worm in appearance. They may be from three to eight or even ten inches long.

Thread worms appear as little shreds of white thread. They are from one-quarter to one-half inch in length and are difficult to distinguish except after careful observation. Sometimes, on examination of the child's rectum and the folds along the external genitals, the presence of these tiny worms will be shown.

### *Symptoms*

There may be no symptoms except finding the worms or their eggs in the stools. The other symptoms which may occur are great irritability and nervousness, disturbed sleep or night terrors. Gritting of the teeth during

sleep is not uncommon. Constant picking at the nose, both when awake and asleep, is usually a sign of some intestinal irritation. There may be headache and loss of appetite. Diarrhoea and colic are not uncommon. The child will complain of itching of the rectum and usually there are symptoms of indigestion with accompanying bad odor of the breath. Any or all of these symptoms may occur in other conditions; therefore, the diagnosis can be made only by the finding of the worms or their eggs in the feces.

### *Treatment*

Treatment of tape worm or round worm is a matter for a physician to decide and the use of special medicine cannot be advised. In the case of the tape worm, it is important to see that every part of it is removed, and in the case of the round worms that they are entirely eliminated. Both conditions are serious enough to warrant obtaining the best possible medical advice.

Pin or thread worms may be treated at home. The best method is to give the child a good cathartic, preferably castor oil or calomel. Once a day the rectum should be irrigated thoroughly with the following solution: one ounce of quassia chips boiled for ten minutes in a pint of water, sufficient water

being added from time to time to keep the final amount at one pint. The solution should be strained and used while warm. Absolute cleanliness of the rectum and external genitals is essential.

The preventive treatment of intestinal worms is to see that the child's hands are washed thoroughly before each meal and that food is not eaten until it has been either cooked or made perfectly clean.

#### *HIVES (URTICARIA)*

Hives occur as an eruption which may be general all over the body or confined to some one part of it. The eruption consists of elevated white or pinkish spots surrounded by marked redness. It is apt to appear rather suddenly, and may persist for several days or disappear within a few hours. It does not leave any scars.

#### *Cause*

The cause is usually due to some form of indigestion. Many people have what is known as a marked idiosyncrasy to certain articles of food. Fish is apt to cause attacks of hives, particularly if it is not fresh. This is true particularly of shell-fish such as crabs, lobster and oysters. In some instances berries, especially strawberries, cause hives, while it is not

uncommon in some children to see marked attacks of hives as a result of eating eggs. Certain drugs will produce this eruption. In some persons no particular articles of food can be discovered as the cause, and the attack may be the result of eating food that is not entirely fresh.

### *Symptoms*

The most prominent symptoms are discomfort of the skin caused by the inflammation of the eruption and the intense itching that accompanies it. This itching may be so severe as to lead to loss of appetite, disturbance of sleep and general irritability and restlessness, particularly in young children.

### *Treatment*

An active cathartic should be given at once, preferably a dose of epsom salts or castor oil. The diet should be extremely light and confined to liquids for several hours or a day. Soda bicarbonate in from one-quarter to one-half teaspoonful doses, depending upon the age of the child, or rhubarb and soda mixture in appropriate doses, will be found helpful. To relieve the itching, bran or soda baths may be given two or three times a day, with the water at a temperature not above eighty-five degrees. The skin

should be patted dry, not rubbed, after the bath, then covered with some dusting powder. Ordinary talcum powder is excellent for this purpose, but in the case of intense itching, stearate of zinc powder will often be found to give the greatest relief.

## CHAPTER VIII

# INFECTIOUS AND CONTAGIOUS DISEASES

There are always two factors to be considered in the occurrence of any infectious disease: first, the presence of the bacteria or germs that cause the disease; and, second, the resistance of the individual. A certain number of children are naturally immune to various infectious diseases; others are extremely susceptible. In general, very young babies are apt to be immune to these diseases. This immunity begins to lessen at about the sixth month, and the child becomes more and more susceptible up to two or three years of age. After that time, some children begin to acquire natural immunity to some types of disease, and this immunity increases until, in adult life, the great majority of people are immune to the ordinary infectious diseases. For these reasons, it is natural to expect the greater proportion of the infectious diseases to occur in early child life, and this is borne out by the statistics that have been gathered in regard to the matter. It is probable that eighty per cent of all cases of the common infectious diseases occur in children under five years of age. The greatest danger in connection with these diseases does not come in

the ordinary course of the disease itself, but rather as a result of the complications that may occur. While good health in a child will not prevent infectious disease, it generally causes the attack to be light, and in some of the infectious diseases, notably tuberculosis, good health seems to be the one thing that will actually prevent development of the disease.

Knowledge of how infectious diseases are transmitted has been distinctly advanced during the past few years. Formerly it was believed that most of these germs were carried through the air so that it was possible to contract infectious diseases merely by association with a person already infected. Now we know that there are few of these diseases in which the germs are air-borne, and that the only way in which most of them can be contracted is by intimate personal association with the sick person. Such diseases can be carried from one individual to another, if the discharges from the nose, throat or bowels of the patient are carried on the hands or clothing. The main way by which infectious diseases are transmitted is through the spray that comes from the mouth or nose of the infected person while coughing or sneezing. Normally, the infectious ma-

terial is not carried through the air beyond a distance of three or four feet.

Infectious diseases may be carried from one person to another by people who are known as "carriers." These are individuals who are not themselves ill but who are capable of harboring the germs of a given disease and by means of coughing or sneezing, or through the bowel discharges, transmitting the germs to a third person. Diphtheria germs may be carried in the throat of a perfectly well person, while there are many instances on record where typhoid fever germs have been found in the bowel discharges of people who were in apparent good health.

There is a superstition which still persists in some parts of the country that everyone must have all the commoner infectious diseases some time during their lives, and that it is better to expose children to measles, chickenpox, scarlet fever and mumps in the hope that the attacks will be light, rather than to risk similar exposure in later life. Every mother should understand that a child should never be exposed needlessly to an infectious disease. These diseases, while often looked upon as necessary accompaniments of childhood, are quite avoidable in a large proportion of cases.

In order to prevent infectious diseases and to avoid epidemics in a community, it is necessary to have proper health laws that are enforced. The sanitary and hygienic conditions in any town should be maintained at the highest standard. All persons who are ill with an infectious disease should be quarantined by the local health authorities until all danger of transmitting the infection has passed. The possibility of transmitting infectious diseases by means of water, milk or foodstuffs should lead fathers and mothers to demand that the health authorities of their towns provide a clean and pure water supply, pasteurization of all milk that is not known to be absolutely pure, and the sanitary and hygienic handling of all foodstuffs. Green vegetables, because of the possibility of their being handled by persons who are infected, may be a means of transmitting disease. This is because these vegetables, in so many instances, are eaten without having been washed. Street dust may harbor these germs and thereby infect vegetables, fruits or other articles that have been exposed. The only safe way is to see that such fruits and vegetables are washed thoroughly before they are eaten.

Proper health laws in a community are absolutely essential for the prevention of

epidemics and separate cases of infectious disease. It is necessary also to carry out certain rules with regard to the hygiene of children for the purpose of avoiding, as far as possible, contraction of any of these diseases, and in order to keep the child in as good health as possible so that, if the disease is contracted, the attack will be light and complications may be avoided.

Measures of prevention include everything that tends to maintain good health and strength and to build up a strong, robust constitution in the child. Such measures of personal hygiene should be commenced in infancy and continued throughout childhood. The most important preventive aid is fresh air. It is well known that infectious diseases reach their height in the winter months, usually during February and March, and then tend to grow less frequent. During the summer months they are practically unknown. In all probability this is not because the germs are more prevalent during the winter or because they develop better in the cold weather. It is probably on account of the common practice of keeping windows closed during the winter and opening them in the summer. Fresh air and sunlight are the greatest destroyers of all germ life, and if they were as readily available during the cold weather as

they are in the summer, it is probable that infectious diseases would be no more common in February than they are in July. This is one of the reasons why children should have the advantage of fresh air as much as possible during the daytime throughout the year, and their play should always be in well ventilated rooms, when it is necessary to keep them indoors. Sleeping rooms should have an abundance of fresh air throughout the night.

Overclothing is also a matter to be guarded against. Clothing for indoors should be little, if any, heavier during the winter than during the summer months, and in order to prevent chilling of the body, care should be taken to see that the outer clothing is sufficient for warmth. Attention should always be paid to wet feet, particularly during the winter months, and children should never be allowed to wear wet shoes and stockings.

A cool sponge bath daily with a warm tub bath at least twice a week promotes elimination of waste material from the body and thus has a great tendency to keep the child in sound health. Good, wholesome food and plenty of recreation are necessary. Special attention should be paid to the care of the mouth and teeth. The main point of entrance for all bacteria to the body is through the mouth. Decayed teeth are a breeding place

for germs. Attention to decayed teeth and cleanliness of the mouth are of the utmost importance in preventing individual infection. The presence of adenoids and enlarged tonsils also predisposes to infectious disease.

During the early years of life the mother must control the health habits of her child. By the time it is two or three years old, there is no reason why it should not learn the kind of health habits that will tend toward prevention of infectious and other diseases, and the following rules should be observed:

- 1st: The teeth should be brushed after each meal and on arising in the morning.
- 2nd: The hands should be washed before each meal and after going to the toilet. The fingernails should be kept absolutely clean.
- 3rd: No toy, pencil or other article that has been used by another child should ever be put into the mouth. Disease germs are easily carried in that way.
- 4th: Each child should have a fresh pocket handkerchief every day. He should not lend it to anyone and should not borrow one from any other child. This handkerchief should be held over the mouth when coughing or sneezing.
- 5th: A child with a cough or cold should be kept entirely apart from other children and should not be allowed to come into contact with them in any way until it has been determined whether or not some infectious disease is about to develop.
- 6th: Each child should have its own drinking cup and towel, both at school and at home, and these should not be used by anyone else.
- 7th: A child should not be kissed on the mouth by anyone but its mother, and she should not do this unless she has every reason to know that she is in good health.

*Early Symptoms of Infectious Diseases*

Every mother should know the early signs of the various infectious diseases, the main symptoms and the length of time the child should be kept isolated. Frequently children have these diseases in so mild a form that a physician is not sent for. Sometimes cases that seem mild in the beginning later become serious, so that in every instance a doctor should be summoned at once if a child is ill.

All the common infectious diseases have certain marked characteristics but there are some cases where children simply develop high temperature and where it is impossible to decide whether or not the illness is of an infectious nature. Young children are particularly susceptible to sudden rises in temperature. This may be due merely to some digestive disturbance, but because of the possibility of the disease being infectious every child who is taken ill should be isolated at once and kept apart from others until the nature of the disease has been determined.

At the onset of any illness, it is wise to give a good cathartic, preferably a tablespoonful of castor oil or calomel in one-tenth grain doses every fifteen minutes until ten doses (one grain) have been taken. If calomel is used, it should be followed in four hours with

a saline cathartic such as citrate of magnesia or epsom salts. If the calomel is given at night, the saline cathartic may be given next morning.

Children who have fever should be put on a liquid diet at once and no solid food should be given for at least twenty-four hours. Milk is the best food to use and thin cereal gruels and milk soups may be given in addition. The child should drink plenty of water. It is best to do this in a routine way, and a glass of water may be offered to the child every two hours and it should be urged to drink as much as possible. A cool sponge bath will often reduce the temperature and make the patient more comfortable. Most important of all, isolation must be insisted upon at the beginning of an illness. This means keeping the child away from everyone else in the household except the mother or the nurse.

*Because of the nature of infectious diseases and the fact that at any time complications may occur which may prove dangerous, medical attention should be obtained at the earliest possible moment.* Except in the case of diphtheria and whooping cough, there is no specific treatment that can be directed toward the cure of any of these diseases, and the medical treatment should be left entirely to the physician. However, the mother should be intelligent regarding the nature of the disease

and should have a general knowledge of the home care that is necessary.

#### *MEASLES*

This is the most common of the infectious diseases of childhood. Few persons live to adult life without having had it. In itself, measles is not a dangerous disease. The main difficulty lies in the complications; that is, in serious bronchitis or pneumonia, which sometimes occur.

#### *Symptoms*

The onset or first symptoms are those of cold in the head. There may be slight fever, inflamed eyes with a good deal of watery secretion, running of the nose, sneezing and coughing. Frequently, the child will complain of the light and will want to remain in a dark room. The rash, consisting of small, irregular groups of dull red, slightly raised spots, does not appear until the third day after the first symptoms begin, and usually it is first seen on the forehead and face, and then spreads rapidly over the entire body.

#### *Method of Infection*

Measles is carried through the discharges sprayed or thrown from the nose or mouth in coughing, sneezing or spitting. There is

therefore no reason why it should be transmitted if other children are not allowed in the sick room and if all body discharges are carefully burned or otherwise destroyed.

### *Home Care*

A child who is sick with measles should be kept in a cool, comfortable and well-darkened room until the rash has disappeared and it no longer dreads the light. Warmth and good nursing are essential. Often light diet and care are all that are needed to bring a case through without complications. The child must be kept isolated until all signs of the rash have disappeared and there is no longer any discharge from the nose and throat.

### *GERMAN MEASLES*

This resembles measles somewhat but is much lighter in form.

### *Symptoms*

Frequently the child does not complain of feeling sick at all. The initial symptom is the rash, which occurs first on the face and then spreads rapidly over the body. The rash may resemble that of measles or scarlet fever. Enlargement of the glands back of the ear is the characteristic symptom to be noted. These appear as rounded, irregular protuber-

ances and are somewhat tender. The eyes may be slightly inflamed and a low degree of fever may occur for a day or two.

### *Method of Infection*

This very infectious disease is spread in the same way as measles.

### *Home Care*

The disease needs little treatment other than good nursing and light diet to effect a cure.

### *SCARLET FEVER*

This is a serious disease, and although not nearly as infectious as measles, it is one that is rightly dreaded.

### *Symptoms*

This disease usually manifests itself suddenly. The child may vomit or complain of sore throat. Sometimes fever or a sharp headache is the first symptom noted. The rash, consisting of fine spots which are so close together that it seems as though the entire skin were a bright red, appears within twenty-four hours after the child begins to feel sick. First it breaks out on the neck and upper part of the chest. The rash will last from three to ten days and will then fade

gradually. Later, at a period varying from two to three weeks, the skin of the body is apt to scale off, sometimes in fine pieces and sometimes in strips of considerable size.

### *Method of Infection*

Scarlet fever is transmitted by the discharges thrown or sprayed from the mouth or nose in coughing, sneezing or spitting, and by discharges from other parts of the body. Because of its serious nature, unusual care must be taken with all body discharges. Burn them immediately or otherwise destroy them. The mother or nurse who cares for the child must be particularly careful in handling these discharges. She should wash her hands frequently and always before touching food. The clothing she wears in the sickroom should always be changed and other clothing put on before she comes into contact with other people.

### *Home Care*

Early and careful attention is of the first importance in this disease. Good nursing, light diet, plenty of water, extreme cleanliness, with rest and quiet, are necessary. There is always the possibility of serious complications following scarlet fever. For this reason it should never be viewed lightly and

a child with this disease should always have medical care.

### *CHICKENPOX*

#### *Symptoms*

Very often there are no early symptoms of this disease, and the first thing noticed is the rash. Occasionally there may be slight fever. The rash, consisting of small, raised pimples which later become filled with fluid, appears usually on the second day. Within a few days scabs form over the top of these raised spots. There may be successive crops of this eruption for a period of as long as ten days.

#### *Method of Infection*

Because the disease can be transmitted only through the secretions contained in the eruption, an infected child should be isolated and kept absolutely away from other children until all scabs have fallen off and the spots are completely healed.

#### *Home Care*

Chickenpox needs no unusual care. Isolation and the ordinary principles of nursing must be carried out. Unless otherwise directed by the physician, the child need not be kept in bed during the illness, but may play about in a warm, well ventilated room.

*MUMPS**Symptoms*

So characteristic is this common disease of childhood that it is rarely mistaken for any other. Its beginning may be sudden or gradual. The child will complain of not feeling well and of pain at the angle of the jaw. The mouth may be dry, and the saliva sticky and scant. There may be difficulty in opening the mouth because of the stiffness of the jaws, and, in many instances, actual pain is felt at the sight of sour foods such as pickles. The characteristic symptom, which is apt to be very painful and may last several days, is swelling in front of the ear.

*Method of Infection*

The infectious material of mumps is carried by means of the discharges from the nose and throat and the period during which the infection may be transmitted lasts as long as there is any swelling.

*Home Care*

Mumps in itself calls for no particular treatment except nursing. However, if the swelling is unusually severe, or if the child complains of much pain, medical advice should be sought and followed.

*WHOOPING COUGH**Symptoms*

The early symptoms of whooping cough are usually those of ordinary cold in the head. Later there is a persistent cough. The characteristic "whoop" does not appear until about a week after the onset of the disease. Sometimes early in the disease, and almost always later on, the main symptom that is noted consists of spasms of coughing. During these spasms the child appears to be choked, usually takes hold of an article of furniture or buries its head in its mother's lap. These spasms may be quite violent at times, and often end in attacks of vomiting.

*Method of Infection*

Formerly it was thought that the disease was infectious during the entire "whooping" period, but now it is believed that its most infectious period does not last longer than two weeks after the first appearance of the "whoop." Because of the possibility of the infection being transmitted for a greater length of time, it is still considered necessary to keep these children away from others during the entire time that they are whooping. The disease is spread by discharges sprayed

or thrown from the nose or mouth in coughing, sneezing or spitting.

### *Home Care*

The home care of whooping cough is difficult because the child should be kept outdoors as much as possible. Fresh air is one of the greatest helps we have in the treatment of this disease, but at the same time the infected child should be kept away from other children. Children with whooping cough should never be taken in public conveyances. While the disease is usually considered a light one, it must be remembered that it is apt to be very dangerous when it occurs in young babies. For this reason, whooping cough should never be neglected but should receive as careful attention as a case of scarlet fever.

### *DIPHTHERIA*

#### *Symptoms*

The early symptoms are those of sore throat, with a rise in temperature. The tonsils are the most common location of the local symptoms. They may be red and swollen and covered with a grayish patch. Diphtheria may occur with the symptoms manifest in the nose or larynx. Any pustular or bloody discharge from the nose or any sore throat is an indication that medical advice

is necessary. Diphtheria is such a serious disease, if left untreated, that proper medical care must be obtained at the earliest possible moment.

### *Method of Infection*

The disease is conveyed by discharges sprayed or thrown from the nose or mouth in coughing, sneezing or spitting and the average duration of the infectious period is about twelve days. A person who has had diphtheria cannot be considered well or ready to be discharged from quarantine until the doctor has made the necessary examinations and determined that the nose and throat are free from diphtheria bacilli.

### *Prevention and Treatment*

This, the most dreaded disease of childhood, is the only one of the infectious diseases in which we have positive knowledge of methods of prevention and cure. Every child who has a sore throat should receive medical attention so that it may be determined as early as possible whether or not the disease is diphtheria. Diphtheria antitoxin should be administered only by a physician. When it is given to children who are likely to be or who have been exposed to the disease it renders them immune for a period of about

three weeks. During that time there is practically no danger of their becoming infected. If the child has already contracted the disease, there should be no delay in giving the diphtheria antitoxin at as early a moment as possible. If given thus early and in sufficient amounts, it is an almost certain cure of the disease. If it is used later, it frequently shortens the attack but it is not always successful. For this reason, immediate use of diphtheria antitoxin in every case of diphtheria or exposure to diphtheria is strongly urged.

In recent years great advances have been made in our knowledge of diphtheria. Schick, an Austrian physician, in 1913 discovered a test whereby it is possible to tell persons who are naturally immune to diphtheria and those who are not. The Schick test can be given only by a physician. It consists in the injection in the skin, usually just below the fold of the elbow, of a small quantity of diphtheria toxin. If the child is not immune, there can usually be seen, in about three days, a certain area of pigmentation or discoloration at the site of the injection. If the child is immune, there is rarely any discoloration at this point. If it is shown that the child is immune, it means that it will not contract diphtheria. If it is not immune it means

that it is susceptible to diphtheria and may contract it at that time, although later it may become immune.

If a child is found not to be immune to this disease, it is now possible for a physician to give an injection of what is known as "toxin antitoxin vaccine." This does not render the child immediately immune to diphtheria but, after a period of a few weeks, immunity begins to develop and it is believed that thereafter the person having such injection cannot contract diphtheria. The injection of toxin antitoxin for the prevention of diphtheria is as simple as vaccination against smallpox, and it is hoped that its use will become as universal.

#### *TUBERCULOSIS*

Tuberculosis is not an inherited disease; that is, it does not descend from the father or mother to the child. Children born of parents who have tuberculosis are nearly always delicate in physique and have what is known as an "inherited tendency" which makes them much more likely to contract the disease than children born of healthy parents. Also, the association of such children with fathers or mothers who have tuberculosis makes it much more probable that they will become infected. However, as long as we know that





*Undernourished Child*

children do not directly inherit tuberculosis, it is possible to do a great deal in the way of prevention by giving them unusual care in regard to their health and by seeing that, as far as possible, they are kept away from any chance of infection.

Such delicate children, in fact all children who are undernourished, should live almost entirely outdoors. Sleeping outdoors should be begun at an early age unless the weather is very cold and stormy. If a sleeping porch cannot be arranged, every effort should be made to have one room in the house as nearly open as possible and used as a bedroom for the susceptible or undernourished child. There should be no possibility of the child becoming chilled, and as much bed clothing as may be necessary should be used. Sleeping suits made like nightdrawers or pajamas, with feet attached, are the most comfortable as well as the safest garments to be used, and a sleeping cap is advised. If the body is kept warm, it does not make any difference how cold the air is, so unless the weather is stormy or unusually cold, children who are undernourished or who are suspected of being susceptible to tuberculosis should always sleep outdoors.

In general, these children should live outdoors most of the daytime, and should have practically no indoor life. Children of this

type need extra food. Three nourishing meals a day and an additional lunch in the middle of the forenoon and in the middle of the afternoon are necessary. This extra lunch may consist of a cup of cocoa or a glass of milk with crackers or bread and butter. In cases of marked undernourishment, or where the child does not digest its food well, it is advisable to give a cup of hot cocoa before going to bed. Every effort should be made to see that the child's nutrition is kept up to normal and the methods outlined in the chapter on "Malnutrition" should be followed.

*CONTAGIOUS EYE DISEASES  
SIMPLE CONJUNCTIVITIS*

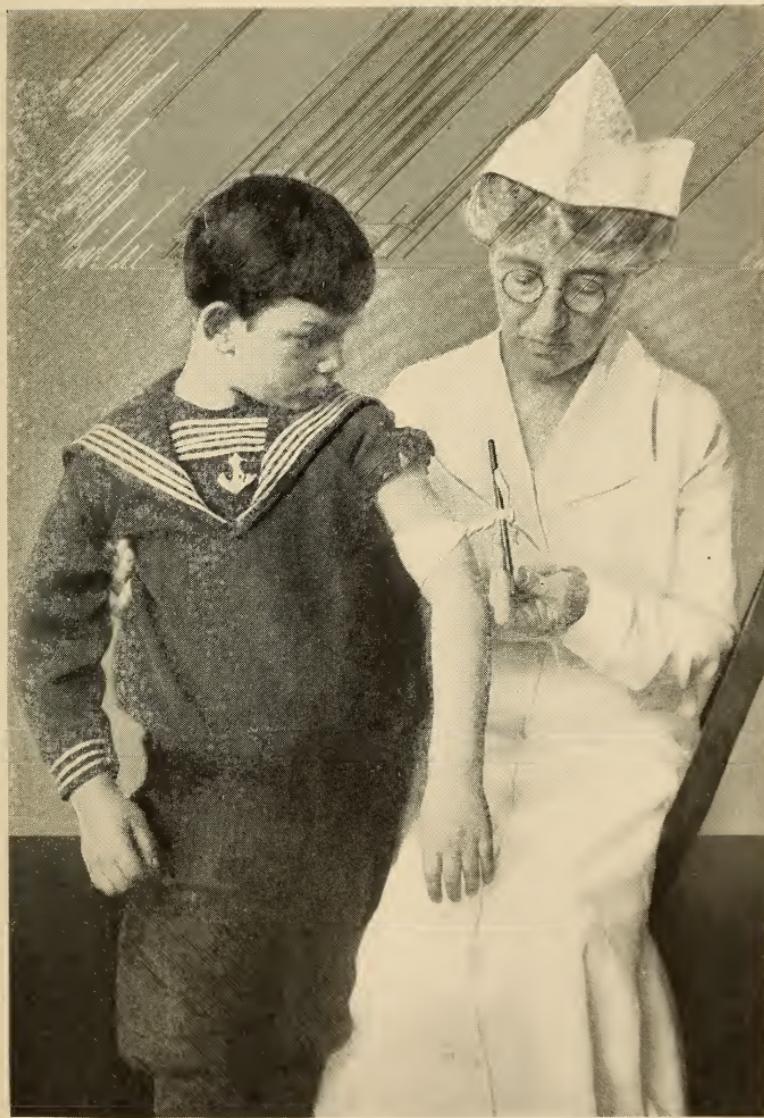
This is sometimes called "acute conjunctivitis" or simply "inflamed eyes."

*Cause*

The cause is usually irritation caused by dust blowing into the eyes or direct infection from the use of a pocket handkerchief that has been used by someone else who has inflamed eyes.

*Symptoms*

The child complains that the eyes itch and the tendency is to rub them constantly. There is a watery discharge and a feeling as though there were some foreign particles in



*Method of Applying Tourniquet to Upper Arm to stop flow  
of Blood from Wound in lower part of Arm. See page  
198 for Instructions.*



the eye. There may be slight pain, but this is not common. The disease is easy to recognize. The white of the eye and the inner surface of the lids are red. The discharge is usually watery like the flow of tears but sometimes the lids are stuck together in the mornings by a gummy exudate which may be seen surrounding the eyelashes.

### *Treatment*

The treatment consists in preventing the spread of the disease by seeing that the child uses only its own pocket handkerchief and towel and that while the condition lasts there is no close association between the affected child and others and that the same toys are not used by both. For the inflammation the best form of treatment is to flush out the eyes thoroughly with a boric acid solution. The method of doing this has been described under the section on "Prevention of Eyestrain" in the chapter on "Personal Hygiene."

### *PINK EYE OR ACUTE MUCO-PURULENT CONJUNCTIVITIS*

This is a serious disease of the eye which is caused by a particular form of bacteria which is known as the Koch-Weeks bacillus.

*Symptoms*

The child complains of great smarting and pain in the eyes, sensitiveness to light and keeps the eyes closed or blinks constantly. There is a sensation as if there were sand in the eyes. The white of the eye and inner surface of the lids are very red and inflamed and there is a discharge of pus mixed with mucus.

*Treatment*

This disease is extremely infectious and will spread rapidly throughout a family or among children if they are in close contact with an infected child. Children suffering from this disease should be kept entirely separate from other children. If medical treatment is available, the child should be placed under the care of a physician at once. If not, it may be treated at home by flushing out the eyes with boric acid solution every two hours. The disease usually lasts for from ten days to two weeks.

*CONTAGIOUS SKIN DISEASES  
RINGWORM*

This is a contagious disease which occurs generally on the face, hands or arms, but rarely on the body. It is probable that children can be infected by playing with cats or dogs who have the disease.

*Symptoms*

Ringworm occurs as a small, round, raised, reddish patch, usually on the face or hands. These patches are generally round, although they may be slightly irregular in shape. They tend to grow quite rapidly and as they grow the center of the patch heals, leaving a well marked, reddish ring which is characteristic of ringworm and gives it its name. There is rarely any itching and the child does not complain of the sore. Frequently there is only one ringworm. There may be several, however, all growing at the same time but on different parts of the face, hands or arms, or there may be three or four in close connection with each other, and these may join to form one large patch.

*Treatment*

Home treatment is common for this type of case as it is not serious, although apt to persist and to spread if not treated. It must be remembered that the disease is very contagious and children so affected should be kept away from other children unless some protective dressing is applied to the ringworm. The simplest and best form of such dressing is to paint the ringworm with tincture of iodine, giving it one coating so that the skin

appears a light brown. This should be allowed to dry and the ringworm then covered with flexible collodion. This treatment may be repeated every other day until the sore is entirely healed. With this protective dressing the child may go about as usual, with no fear of transmitting the contagion to others.

#### *SCABIES*

This highly contagious disease of the skin is sometimes known as the "itch." It occurs more commonly among children who are not well nourished and who do not live in sanitary surroundings. It is transmitted by towels, clothing, pocket handkerchiefs or prolonged and close personal contact. It is not as infectious as ringworm but is a far more difficult disease to control and spreads much more rapidly when once contracted.

#### *Symptoms*

The first thing usually noticed is a slight eruption which appears between the fingers. If examined carefully when it first occurs, small white specks may be seen, and running from them will be slightly raised white or grayish lines from one-eighth to one-quarter inch in length. These specks mark the points where the tiny parasite which causes the disease has burrowed under the skin. The

first symptom noticed by the child is one of intense itching, and as a result the infected place is scratched almost from the beginning, so that within a very short time all that can be seen are many pimples or pustules surrounded by red areas, with sometimes a good deal of inflammation and occasionally bleeding as a result of the scratching. The skin between the fingers is first affected, then the back of the hands and the back and front of the wrists. Later, the disease may spread to the forearms and if untreated the eruption may appear all over the body. The main characteristics are the starting point of the eruption between the fingers, the intense itching and the gradual extension of the infection.

### *Treatment*

The home treatment of scabies consists in scrubbing the eruption with a stiff bristle brush, tincture of green soap and hot water. The affected parts should then be dried carefully, and covered with sulphur ointment. When the eruption is on the hands, the child should wear white cotton gloves and not touch any article that is to be used by any other person. The treatment is to be repeated every other day. In the meantime, the part should be kept covered carefully with the ointment.

Usually the disease will heal within a very few days as a result of this treatment.

#### *IMPETIGO*

This is a common skin disease which is generally found in children who are under-nourished and who do not live in good sanitary surroundings. It is very contagious and often the child will start with one sore appearing on the face, and, by scratching this sore and then scratching other parts of the body, there may be successive crops of these sores growing in several places. Usually it is found on the face and hands. It is infectious and may readily be transmitted from one child to another by means of pocket handkerchiefs, towels, clothing, or any article that has been handled by the infected child.

#### *Symptoms*

A reddish patch will form on the face or hand of the child. This rapidly becomes inflamed and secretes a yellow fluid which dries and forms a crust or scab. The scabs are irregular in shape, with turned-up edges. Around the edge there is a good deal of inflammation or redness of the skin. There is rarely any itching but the sore itself is disfiguring and may be quite large.

*Treatment*

The sores should be soaked thoroughly with tincture of green soap and warm water, and the crust or scab removed gently. Zinc oxide ointment should then be applied freely and a thick coating left on. The sores should be kept continually covered with the ointment but need not be covered with any other dressing.

*PEDICULOSIS*

Head lice are common among the children of our large cities. Because their occurrence is so widespread, anyone is apt to become infected, and even a well cared for child or adult may acquire these head lice or pediculi. The disease is classified as contagious because it is so readily transmitted from one person to another. It is not probable that pediculi live long unless they are on the human body, but it has been demonstrated that they can be transferred readily from one person to another by means of hats or other articles of clothing which have been infected.

There are two common varieties of lice—those which infect the head and those which infect the body. They are quite different and body lice are not found on the head, nor head lice on the body. Body lice or what are now known as "cooties" are comparatively rare in

this country, and the variety which commonly infests the hair of children and adults are those which live and grow on the hair or scalp.

### *Symptoms*

Usually the first symptom noted is that the child is continually scratching the head. Closer observation may show that there is a certain amount of redness or even a slight eruption on the back of the neck, sometimes reaching for a considerable distance down the back. The only positive assurance that the condition exists is finding the actual bugs or pediculi in the hair. These pediculi breed very rapidly. First they deposit their eggs in the form of whitish particles which are closely adherent to the hair. These eggs or nits hatch out at the end of six or seven days, and in about two weeks the new pediculi are capable of breeding more. The nits or eggs are fastened to the hair by a gummy substance and it is not possible to detach them unless this gummy substance is dissolved. The ordinary location of the eggs or nits is at the back of the head, behind the ears and just above the neck. They may usually be seen quite readily when the child's hair is lifted up, and appear as small white particles which closely resemble dandruff.

*Treatment*

The first object of the treatment is to get rid of the live pediculi, and second, to see that the nits are entirely removed from the hair and destroyed. As long as any nits remain there is always the possibility of reinfection. There are on the market a large number of solutions or cures for this condition. Tincture of larkspur is an excellent remedy, but it is expensive. As it is a poison, it must be handled with great care, and never left within the reach of any child who may take it internally. Also, it is not safe to use it on the scalp if there are any raw surfaces. If the disease is in an early stage and its use can be controlled, tincture of larkspur is a pleasant solution to use and may be applied in the same way as kerosene and sweet oil, which is the ordinary home treatment.

In treating pediculosis, the hair should be soaked thoroughly with the tincture of larkspur or with a mixture of equal parts of kerosene and sweet oil. This must be rubbed thoroughly into the scalp, care being taken to see that every particle of the hair is wet. The hair should then be bound up loosely on the head and the whole covered with a towel which must be fastened in place and left overnight. In the morning, the hair and

scalp should be washed thoroughly with hot soapsuds. After drying, a fine tooth comb should be used to see that all pediculi are combed out of the hair and, in addition, that as many as possible of the nits are removed. Usually the latter will be found to be a difficult process and it is probable that further efforts will have to be made to loosen the nits from the hair. This is best done as follows: After the hair is dry, a clean fine tooth comb should be wet either with vinegar or a solution of one teaspoonful of potassium carbonate in a pint of water. The hair must be separated into fine strands and combed carefully. This may have to be repeated every day for several days and treatment should not be stopped until it is absolutely certain that none of the nits remain.

## CHAPTER IX

### ACCIDENTS AND INJURIES

In every family of young children, numerous occasions will arise where emergency treatment or "first aid" must be given for minor injuries or accidents. In the great majority of instances, home aid is all that is necessary, and with the supplies on hand that are enumerated in the chapter on "The Children's Medicine Chest," this aid can be given. It is wise to copy, in typewriting if possible, a brief outline of the methods to be used in dealing with these various emergencies. This outline should be pasted on the inner side of the door of the medicine closet where it will be available at a moment's notice for reference when the need is most urgent.

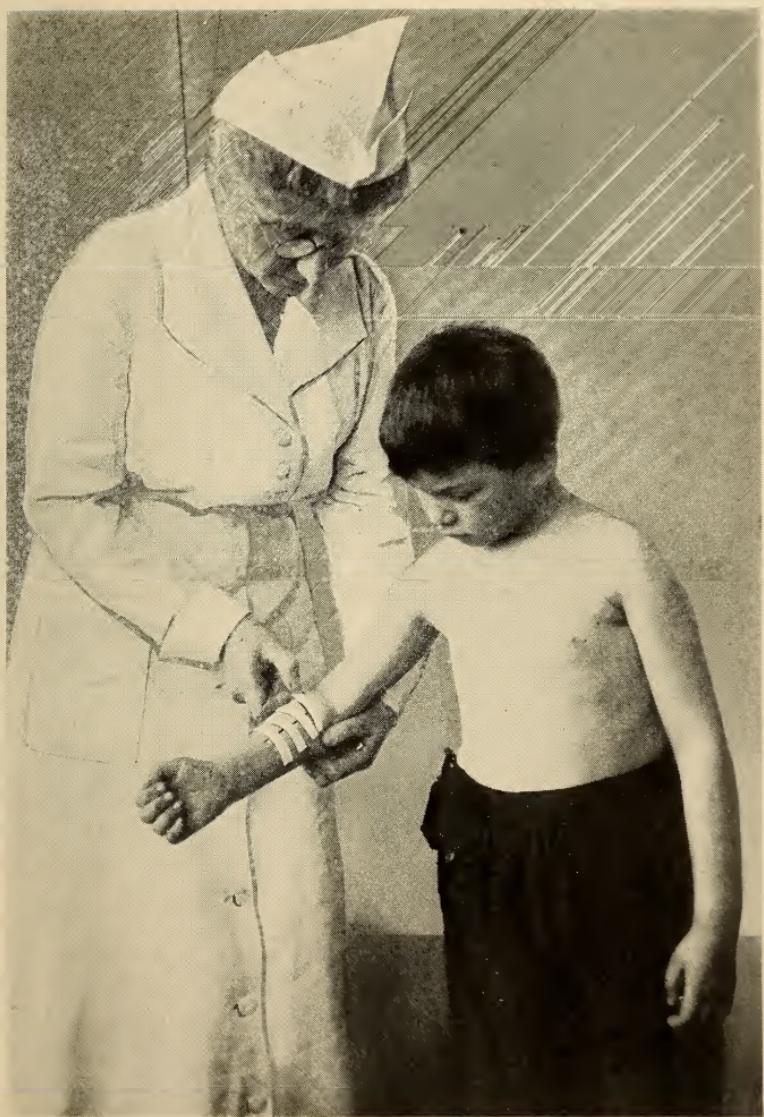
#### *First Aid*

"First Aid" is a term which refers to the immediate help that can be given in any emergency. Usually, the minor accidents of childhood are not at all serious, although for a short time they may be quite painful. Nevertheless, there is always the possibility that what seems to be a simple injury may prove to be a serious one, and for that reason the mother should know not only the things to be done that will make the patient most

comfortable at the time but the kind of first aid treatment that may be given that will prevent further complications.

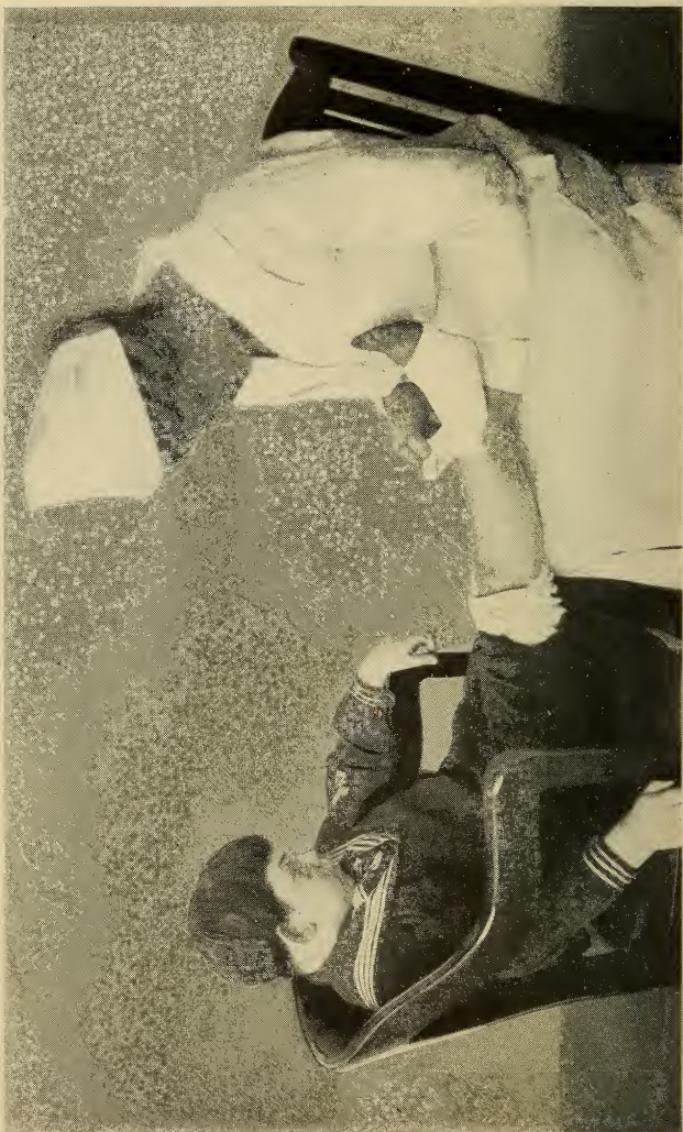
### *Bruises*

Bumps and bruises are the most common of all accidents of childhood. The normal, active child is constantly falling. The ordinary bump or bruise needs very little attention; in fact, it may be safely ignored in the majority of instances, and it is unwise to attach undue importance to such slight injuries. The normal child will forget all about them a few moments after they have occurred, and if the skin is not broken and there is no danger of infection, the simple bruises and bumps may be left untreated. If there is marked swelling, however, or if the injury has been extensive, it is well to use some readily available methods of reducing the swelling and preventing the discoloration that sometimes comes with a severe bruise. For this purpose, cold is the best application. It may be applied by wringing out cloths in ice water and placing them directly over the affected part. They should be changed repeatedly so that the applications may be kept ice cold, and such applications should be continued for at least half an hour. At the end of that time a more permanent dressing



*Method of Applying Strips of Adhesive Plaster  
to Bring Edges of Wound Together.  
See Page 199 for Instructions.*

*Method of Bandaging Sprained Ankle*



of a pad of gauze or linen, thoroughly wet with witchhazel, may be applied. This should be fastened with a bandage so that it may be kept in constant contact with the bruise or bump.

### *Cuts*

Cuts may be made by some sharp instrument, so that the edges are clean and readily come back into contact with each other, or they may be jagged, with rough edges and more or less dirt may have been rubbed into the wound. In order to avoid the possibility of infection, it is well to allow the cut to bleed freely for a moment or two. If the blood flows evenly, very little will be lost during this time, and the tendency is for the wound to be cleansed in this manner. If the blood comes in spurts, it is probable that an artery has been severed. In that case the blood should not be allowed to continue to flow, but should be stopped as soon as possible. Long continued bleeding is harmful in any case, and definite measures may have to be taken to control it.

The first and easiest measure is to apply pressure directly over the bleeding area. The edges of the wound should be brought together and held firmly. If the bleeding is slight, this will usually control it. A pad of

gauze placed tightly over a cut will also control the bleeding, provided sufficient pressure is maintained. If the cut is deep and the spurting blood shows that it comes from a fairly large artery, pressure should be made not only directly over the bleeding part but also between the bleeding point and the center of the body. For instance, if the cut is on the finger, pressure should be applied by winding a stout strip of muslin around the finger at its base and holding it very tight for a few moments. Bleeding of the forearm can be checked by applying a tight bandage, called a tourniquet, around the arm between the bleeding point and the elbow. A deep cut in the upper part of the arm may be controlled by applying a tourniquet above the bleeding point and near the shoulder. The same principle applies to controlling bleeding in the legs. Bleeding in any part of the head, however, or in the trunk of the body, will have to be controlled by direct pressure. This is always best applied by means of a well-folded pad of gauze or clean linen which is placed over the wound after the edges have been drawn together carefully, and which is held in place by a tight bandage or strips of adhesive plaster. (See illustration opposite page 184.)

While it is necessary to stop bleeding as soon as possible, it is equally necessary to see that the wound is cleansed thoroughly before it is closed up. In ordinary cuts or scratches, after the wound has been allowed to bleed for a moment it should be washed out with clean cold water and then with hydrogen peroxide. If this is not available, boric acid solution is an excellent substitute. A wound of any kind must be kept perfectly clean, but unless the dressing becomes much soiled, renewed washing and cleansing will not be necessary within at least twenty-four hours. If the bleeding can be controlled and the edges of the wound are clean-cut, they may be drawn together tightly and held in that position with strips of adhesive plaster at right angles to the direction of the cut, with several layers of gauze placed over it for the purpose of cleanliness, and a bandage wound around the entire dressing. As soon as the edges of the wound begin to heal, it should be kept perfectly dry and covered with a little boric acid powder which, in turn, is kept in place with a gauze or muslin bandage. Cuts or open wounds will heal much more quickly under this treatment than if ointments are used. (See illustration opposite page 196.)

*Burns*

The important thing to remember about burns is that the pain is due mainly to the contact of the sore surface with the air, therefore the idea back of the treatment of burns is to afford a protective dressing so that the air may be excluded. Many household remedies may be used for burns. Among the most common is a mixture of baking soda and water, applied as a thick paste. Flour will do, if nothing else is available. Unsalted butter or lard is excellent. Any perfectly clean, unsalted grease will do in an emergency. One of the best applications is sweet oil, or, if it is available, carron oil can be recommended.

If the burn has been extensive and serious, so that the body is involved, the clothing covering it should be cut away and never removed forcibly. Soaking the burned parts of the body in water will make it easier to remove pieces of clothing, but care must be taken to see that the parts are not injured again.

After the burned part has been well covered with any one of the remedies mentioned, a dressing of soft gauze or absorbent cotton should be applied, after which it may be bandaged lightly. The dressings may be removed every day, if they are soiled, or every two days if there is little secretion, and the

burn kept clean in order to avoid infection. Dressings which adhere to the wound should be soaked off with warm water and the oil or other application re-applied. Extensive burns are apt to cause serious shock to the nervous system, and if there is any general prostration following such a burn, the doctor should be sent for. In the meantime, the patient should be absolutely quiet, and stimulants such as aromatic spirits of ammonia or hot coffee may be given.

### *Sprains*

What is called a "sprain" usually results when some ligament or tendon is subjected to undue strain or to some sudden stretching or even tearing of its fibers. The most common place for a strain to occur is in the ankle, then the wrist. Sprains and strains in other parts of the body are comparatively infrequent.

Usually the first sign noted is a sharp pain and inability to use the joint that has been sprained. Swelling around the point of the injury follows very rapidly. Just as soon as possible the affected part should be plunged into very hot or very cold water, care being taken, of course, not to have the water so hot as to burn the flesh. Hot water is preferable, if it can be obtained, but cold water will have

an almost equally good effect, and usually it is more readily available.

While the hand or the foot is held in the water, it should be rubbed gently and kneaded and the water should be changed at frequent intervals so that it may be kept hot or very cold. This bathing should be continued for at least half an hour. The ankle, wrist or other joint that has been sprained should then be wiped and placed in such a position that it will not be used. It must be kept perfectly quiet for at least twenty-four hours, and during that time should be covered with a dressing wet with either cold water or extract of witchhazel. The main thing to remember is that the dressing should be kept wet. An easy way to apply such a dressing is to cover the joint with folds of gauze and wrap a bandage loosely around it. The foot or hand should be held over a basin and the cold water or witchhazel poured over the bandage until it is thoroughly wet. This may be repeated whenever the bandage becomes dry, with a minimum of disturbance both to the patient and the dressing.

One of the best ways to keep the ankle quiet is to place the leg between two pillows. At the end of twenty-four hours the swelling should have subsided to quite an extent. Further treatment consists in massaging the

joint twice a day. A little oil or vaseline may be rubbed on the hand while this is being done.

For slight sprains, the after treatment consists in bandaging the foot with a strong muslin bandage or wearing an elastic ankle protector, with high laced boots, the purpose being to give the ankle support and at the same time allow a certain amount of freedom of motion. For more severe sprains, it will probably be necessary to bandage the ankle with adhesive plaster. While this may be done after a little practice, it requires a certain amount of dexterity. Every mother should ask her family physician to teach her how to strap or bandage a sprained ankle. She may never need this knowledge, but if she should at any time, it will be found of great value. (See illustration opposite page 197.)

The former treatment of sprained joints consisted in keeping them perfectly quiet for a long period of time. At the present time, however, as soon as the swelling has subsided, we believe that motion is the best treatment, therefore, a reasonable amount of walking about may be permitted, provided the ankle is well bandaged. The massage should be kept up at frequent intervals until the pain, tenderness and swelling have disappeared.

*Strains*

A strain is simply a much lighter form of sprain, and should be treated in the same way.

*Broken Bones*

Breaks or fractures in young children are not of the same type as those found in adults. The bones of very young children contain much more animal matter than mineral matter, and are more flexible. Breaks, therefore, instead of completely severing one part of the bone from the other, are in the nature of what we call "greenstick" fractures. The difference between the two may be illustrated by taking a dry stick of wood and breaking it, then taking a green twig and breaking that. It will be found in the latter case that, while the fibers may be drawn apart and injured, the pieces of twig are not wholly separated from each other.

Fractures may be of two kinds: The simple fracture, where the bone is broken but without marked injury to the tissue surrounding it, and the compound fracture, where the bone is broken and fragments of bone have penetrated through the flesh, thus causing both a break and a wound.

The home treatment of fractures of any kind, whether greenstick, simple or compound,

consists in placing the part at rest until the doctor can be summoned and the fractured bone set back into its proper relation. In order to keep the arm or leg perfectly quiet, the patient should be put to bed and the injured limb placed between two pillows. If it is necessary to carry the patient any distance, a crude splint may be made by fastening a board or even a stick of wood, an umbrella or a cane, to the injured limb. This stick may be tied on to the leg by fastening a handkerchief above and below the point of fracture. Its only purpose is to keep the leg as nearly motionless as possible.

It is not possible for an untrained person to set a bone, therefore every effort should be made to get a doctor at the earliest possible moment, as neglected fractures may result in serious deformity.

### *Nosebleed*

Constant flow of blood from the nose may be the result either of an abrasion in the mucous membrane, which bleeds readily when scratched, or it may be the result of a sharp blow on the nose. Unless the bleeding persists for a noticeable length of time, no particular treatment is necessary, as it usually tends to stop of itself. The child should be kept as quiet as possible. Sitting up is a bet-

ter position than lying down. The same principle must be applied in stopping a hemorrhage of the nose as has been discussed under the heading of treatment of bleeding as a result of cuts. A simple way to apply pressure is to take a piece of stiff paper about one inch long and one and a half inches wide. This should be folded twice so that there is a sharp, folded edge. The paper with this edge uppermost should be inserted between the upper lip and the gums of the upper teeth, so that the sharp edge presses against the blood vessel directly in the center, at the point where the inside lip joins the top of the gum. The sharp edge of the paper should be held there so that the pressure against the blood vessel is continuous. If the child is kept perfectly quiet while this is being done, the bleeding will usually stop in about a minute.

Other methods that have been found valuable are to apply icebags to the back of the neck, cold water on the nose itself, or, in the absence of any other method, the nostrils may be grasped firmly between thumb and forefinger and held entirely closed. Packing the nose with perfectly clean, sterile gauze should be done only in case of great emergency. If the bleeding persists, however, notwithstanding everything that can be done to stop it, such action is justifiable. In order to do

this properly, a strip of sterile gauze about one inch wide and one yard long should be taken. The end of it should be grasped with a small pair of forceps and the gauze inserted far back into the nostril. The rest of the gauze should then be pressed well back into the nose, making a firm packing. This must be done gently and without undue pressure. The reason why the nose should not be packed with gauze except in case of extreme emergency is that it is exceedingly difficult to remove the packing and when it is removed, the hemorrhage may return. If the packing has been applied, therefore, it should be removed by a physician.

After nosebleed, care should be taken to see that the child does not blow its nose for some time after the bleeding has stopped. If the bleeding occurs with fair regularity, and in the absence of any accident, it is probable that there is some special bleeding point in the nose that should receive attention. In order to cure it, it will be necessary to take the child to a physician and obtain proper treatment.

### *Insect Bites and Stings*

Children, as well as adults, vary in their reaction to bites and stings of insects. Sometimes the swelling and reaction are quite ex-

tensive and the pain may be acute. The main danger in insect bites is from the poisoning which may result when the stinger of the insect is left in the child's flesh or from the bite or sting becoming infected afterwards. This latter usually results from the itching which is common after the bites of certain insects and the fact that the child scratches the bite and so infects it.

Usually mosquito bites are treated best by applications of spirits of camphor or a moderately strong solution of ammonia. Thereafter, in the case of children, it is well to see that the bites are kept as protected as possible. This may be accomplished, if the bites are on the legs, by having the child wear long white cotton stockings. If mosquitoes are prevalent, long-sleeved, high-necked dresses are advised. Every effort should be made to see that the child is so cared for that the possibility of being bitten by mosquitoes is reduced to a minimum. Windows should be screened and, if necessary, mosquito netting placed over the beds and cribs.

Stings of bees need slightly different treatment. An attempt should be made to remove the stinger at once. Usually it may be seen as a tiny, round black spot, directly in the center of the wound. Sometimes it can be removed with the fingernails, although oc-

asionally the use of a tiny pair of forceps is necessary. Immediate relief from the sharp pain may be obtained by applying cloths dipped in ice water. Cloths wet with a solution of boric acid are excellent as protective dressings. A solution of ordinary baking soda, one tablespoonful to a cup of water, can be used. A simple ointment, such as zinc oxide ointment, is also an excellent remedy. In young children the sting should be covered with a protective dressing, so that it may not become infected by scratching.

### *Foreign Bodies in the Throat*

Very young children are apt to put everything into their mouths. For that reason there should be no loose or detachable parts to their toys and they should not be given anything to play with that they may put into the mouth and swallow. If a foreign body is swallowed, the mother should try to remain as calm as possible, under circumstances that are always distressing. If the child is frightened and begins to cry, it is probable that the foreign body will become more firmly lodged in the throat. While action to relieve the child should necessarily be quick, there should not be any panic.

First of all, the child should be slapped smartly on the back between the shoulder

blades. Frequently this will dislodge the foreign body. If not, the child should be seized by the legs and held directly upside down. At the same time several sharp, quick blows should be given with the palm of the hand, directly over the back of the child's chest. These slaps should be sudden and quick, and usually the first one or two will dislodge the offending article. Sometimes, however, it is necessary for the mother or father to put a finger into the child's throat to try to dislodge the foreign body. In such case, care must be taken not to push it farther down, but, if possible, to remove it a little to one side so that it may be coughed up readily. Remember that the tendency is always for a child to expel any foreign body that is lodged in the larynx or windpipe. If it gets into the epiglottis, or tube which carries food to the stomach, it usually does not interfere so much with the child's breathing but causes distress because of the feeling of pressure in the throat. In such instances the article may sometimes be carried down through the stomach and intestines if the child is fed considerable quantities of soft bread or mashed potatoes. This treatment is particularly good when a child has swallowed any sharp thing such as a fish bone or a pin. With the soft bread (no crusts) or

mashed potatoes the child should drink plenty of milk. In this way the article becomes covered with a mass of soft food which readily passes off through the bowels. If the bowel movements are watched carefully, the foreign body will usually be found within two or three days. During the time this treatment is being carried out, great care must be taken to see that no cathartics are used, as they tend to liquify the bowel movements and prevent the formation of the large soft mass of food that will protect the foreign body.

### *Foreign Bodies in the Eyes*

Usually these consist of particles of dust, and, occasionally, a small insect may be found. First, the lower lid should be pulled down, and, if the foreign body is seen readily, it may be dislodged with the corner of a perfectly clean handkerchief. Care should be taken that the eyes are not rubbed hard. The child should be instructed to blow the nostril on the side opposite the injured eye, while the other nostril is held tightly closed. If this is not successful, rubbing the uninjured eye will sometimes cause such a flow of tears that the particle may be washed out. The injured eye should never be rubbed.

A simple method of removing particles that are under the upper lid is to draw the upper

lid well down over the lower one. The eyelashes of the latter then act as a brush to wipe off the inner side of the upper lid, and the offending particle may often be removed in that way. With a little practice, one may learn to turn back the upper eyelid over the edge of a coin. It is well for the mother to ask her doctor to teach her how to do this, as often a foreign body that is lodged on the inner side of the upper eyelid can be removed in that way when it is impossible to do so by any other method.

If, after trying these various methods, the foreign body is still felt in the eye, the child should be taken to a doctor, as it is possible that it may have become imbedded in the eyeball, from which it can be removed only by a skillful physician. After any foreign body has been removed from the eye, the latter should be thoroughly flushed out with boric acid solution every three hours until all symptoms of inflammation have subsided.

#### *Foreign Bodies in the Ear*

Usually, the only kind of foreign body that gets into the ear is some small insect. The treatment in this case is to drop four or five drops of sweet oil or castor oil into the ear canal. The oil should be slightly warm before it is used and may be put into the ear

with either a teaspoon or a medicine dropper. It should be left for about five minutes, the child lying quietly, with the affected ear uppermost. At the end of that time the ear should be syringed gently with plain warm water and a rubber ear syringe. The latter consists of a small rubber ball with a short, pointed outlet, and can be obtained at any drugstore. While syringing the ear, the head should be held sideways over a basin so that the water will run out freely. No force should be used. The oil will kill the insect, and the water will cleanse the ear so that the foreign body will usually come out with it.

## CHAPTER X

### THE CHILDREN'S MEDICINE CHEST

A special medicine chest or wall closet should be provided where the commoner remedies and dressings so often needed for children may be kept.

#### *Type of Medicine Closet*

The best kind of medicine closet is one that can be hung on the wall. The suggested dimensions are twenty-four inches in height, eighteen inches in width and seven inches in depth. The closet should have two shelves inserted, so that three spaces may be available. A good rule is to have the lower shelf eight inches above the bottom of the closet, to provide for tall bottles and boxes of dressings. As the dimensions given above are outside measurements, this will leave a total inside space of about twenty-one inches. The second shelf should be placed about seven inches above the first, leaving a space of six inches above the second shelf. These heights will be found proper for ordinary medicine bottles.

The cabinet should be provided with a door and a good lock, with a hook placed on the outside, well up on one side, on which the key may be hung. When placing the cabinet against the wall, care must be taken to see

that it is hung high enough so that the children cannot reach it. This is important, for little children cannot be supposed to show discretion, and serious results may follow if they obtain the medicines.

### *Special Rules for the Medicine Chest*

1. All poisonous substances should be kept in blue bottles of distinctive shape. As a general thing, druggists supply poisonous substances in bottles of special type. Sometimes they have knobs or projections over their surfaces, as well as over the surfaces of the corks, which usually are of glass. Sometimes they are diamond-shaped to distinguish them from the ordinary round or square bottles. Whatever style is adopted, it should be one that can be recognized by touch as well as by sight so that, even in the dark, there will be no possibility of mistaking the bottle that contains an external or poisonous remedy for one that may safely be used internally.
2. Bottles which contain medicine that has been prescribed by a doctor and only part of which has been used, should never be saved. Such medicines are always prescribed for a particular illness and for a particular person, and unless the doctor states that the medicine will be good for other uses, it should be thrown away after the illness is over. Do not make the mistake of using for any illness a medicine that has been used previously for an illness that may be considered similar, unless the doctor especially recommends it.
3. Before using any medicine taken from the medicine closet, the label should be examined carefully. Never trust to memory as to the general appearance of a bottle and always find out the exact contents before using.
4. Keep all dressings and utensils on the lower shelf, together with any unusually large bottles. On the next shelf keep the remedies that are to be used internally, leaving the external remedies and any poisonous drugs for the top shelf.

The following articles and dressings are recommended. These may vary from time to time, to suit the needs of different families

but, in general, the list comprises the simple remedies and supplies that will meet the needs of most of the accidents and simple diseases that commonly occur during child life.

### *List of Articles Recommended for the Medicine Closet*

Teaspoon.

Medicine glass, marked with teaspoonful and tablespoonful doses.

Clinical thermometer.

Scissors.

Package of large safety pins.

Yard of sterilized gauze, in sealed package.

Five yard roll of adhesive plaster, one inch wide.

Small package of absorbent cotton.

One pound flaxseed meal in airtight box.

Package of prepared mustard leaves.

Hot water bottle } These may be hung on the outside  
Fountain syringe } of the medicine closet.

One-half pound boric acid powder.

One-half pound bicarbonate of soda (baking soda).

One ounce stearate of zinc powder.

Three ounces of grain alcohol.

Three ounces of camphorated oil.

Jar or tube of white vaseline.

One ounce of zinc oxide ointment.

Three ounce bottle of witchhazel.

Three ounces of carron oil (equal parts lime water and linseed oil).

Two ounce bottle aromatic spirits of ammonia.

Two ounce bottle castor oil.

One hundred tablets of calomel, each containing one-tenth grain.

Bottle milk of magnesia.

Two ounces syrup of ipecac.

Two ounces brown mixture.

Three ounces rhubarb and soda mixture.

Two ounces compound licorice powder.

*Flaxseed Poultices*

Although an old-fashioned remedy, flaxseed poultices are still one of the best aids we have in croup and the common colds that occur during childhood. For croup, the poultice should be placed around the neck, and for colds they should be large enough to cover the entire chest. They should be applied as hot as they can be borne and allowed to remain only until they become cool. If used during the daytime, and if the cold is a serious one, the poultices may be renewed two or three times. At night they should be taken off before the child goes to sleep. As soon as they are removed, the chest and neck should be rubbed well with alcohol or camphorated oil, then covered with a piece of flannel or a layer of cotton.

To make flaxseed poultices, take a pint of water and bring it to a brisk boil. Sift flaxseed meal gradually into the water, making a thick paste. Lay a large oblong piece of gauze or old linen on a clean table and spread the flaxseed mixture on this to a thickness of about one inch, covering an area large enough to cover the child's chest or to go around the neck. The edges of the gauze or linen should then be folded over the poultice, making three or four layers in the back, while in front there

is only the one layer of linen or possibly two of gauze.

### *Mustard Leaves*

For more serious colds or for cases of bronchitis or for acute stomach pains, mustard leaves are valuable. Usually they come already prepared, with accompanying directions. They are to be dipped in warm water before being applied. Care must be taken to lift up the edges of the leaves at frequent intervals to watch the condition of the skin. The leaves should be removed as soon as the skin becomes well reddened and before it has had a chance to blister. After the plaster is removed, the skin may be dusted with talcum powder or brushed lightly with olive oil, then covered with absorbent cotton.

### *Boric Acid Powder*

This may be used in the form of a powder, as an antiseptic for open wounds, or in the form of a solution. The latter has its main use as an eyewash or as a mild antiseptic wash for burns, cuts or where the skin is broken.

Boric acid solution is prepared by adding one tablespoonful of boric acid powder to one pint of water. Boil in a clean dish for five minutes, adding water from time to time so that the total remains about one pint. Pour

the solution into an absolutely clean bottle that has been thoroughly scoured with hot soapsuds and rinsed with boiling water. Keep the bottle tightly corked.

### *Zinc Oxide Ointment*

This is a good remedy for burns, scratches, chafing and various forms of skin diseases, including eczema. It should be spread thickly on a piece of sterile gauze, then laid over the sore. The dressing may be made complete by fastening it to the skin with two strips of zinc oxide plaster. The edges of the plaster should be partly on the gauze and partly on the skin, with the ends of the plaster strips reaching beyond the gauze so that it may be attached firmly to the skin, thus fixing the dressing in place. Such a dressing should be changed once each day in the early stages of the sore. Later, it may be left on for two or three days.

### *Stearate of Zinc Powder*

This is one of the best dusting powders we have for severe chafing, prickly heat, itching of the skin or for use on any surface where it is desirable to exclude moisture. The powder is greasy and will adhere to the skin so that the bodily secretions, such as urine, will flow

over the surface without causing any skin irritation.

### *Witchhazel*

Witchhazel is such a common household remedy that every family will think of many ways in which it can be used. It is excellent for sprains of any kind and in cases of bumps or bruises. Its best results are obtained when it is applied in the form of a wet compress that can be bandaged on so that the full value of its soothing effects may be secured.

### *Carron Oil*

This is probably the best remedy we have for burns. It consists of equal parts of linseed oil and lime water. The mixture does not keep well, and, particularly in warm weather, it is better to keep the ingredients separate and to mix them as needed. It must be shaken well so that a thick emulsion is formed. This should be spread liberally over the burned surface and covered with clean gauze. Absorbent cotton should then be placed over the gauze so that all air will be excluded.

### *Aromatic Spirits of Ammonia*

This may be used in any fainting attack or in case of severe shock. For children under

five years of age, not more than one-quarter teaspoonful in one-third glassful of water should be given. This may be increased gradually up to a teaspoonful for a child of fifteen years. The dose may be repeated at intervals of not more than one-half hour for two or three doses.

### *Castor Oil*

This universal household remedy should always be kept on hand. It keeps well in cold weather, but in warm weather the supply must be renewed from time to time. At the first sign of any digestive disturbance in a child, a dose of castor oil should be given and all feeding stopped. Nothing but cool boiled water should be given for several hours. Later, milk and weak broths or cereal gruels may be given.

The dose of castor oil varies slightly with the age of the child. The average doses are as follows:

### *Average Doses of Castor Oil*

Under three months, one teaspoonful.

Three to six months, two teaspoonfuls.

Six to twelve months, one tablespoonful.

The latter dose will usually be found adequate for any child up to ten years of age. It is best given as follows:

The glass should be washed out in very cold water. Pour a small portion of orange juice into the glass and follow with a layer of castor oil. Complete with more of the orange juice. If this is done carefully, the orange juice and the castor oil will remain in three layers and the whole dose can be swallowed without tasting the oil.

In general, castor oil should not be used as a regular remedy for constipation. While its immediate effect is a loosening of the bowel movement, its after-effect is to render the child slightly constipated and its constant use tends to take away from the bowels their power of movement, therefore it should be used only in case of an emergency or in acute illness.

### *Calomel*

When it is found impossible for the child to take castor oil, the next best remedy is calomel, followed by some form of saline cathartic such as citrate of magnesia or epsom salts. Calomel may be given in cases of acute indigestion or at the beginning of any attack of fever, or if there are any symptoms of acute illness. The doses of calomel are as follows:

### *Doses of Calomel*

For children from two to five years of age, one-tenth grain tablet every 15 minutes until 10 tablets have been taken (one grain).

For children from five to ten years of age, one-tenth grain tablet every 15 minutes until 15 tablets have been taken ( $1\frac{1}{2}$  grains).

Calomel should be taken in the late afternoon or evening, and next morning the child should drink a glassful of citrate of magnesia or two teaspoonfuls of epsom salts, dissolved in a glass of water. The citrate of magnesia tastes like mild lemonade and children take it readily.

### *Milk of Magnesia*

For young children in particular, milk of magnesia has a slightly laxative effect and at the same time tends to correct any disturbed condition of the stomach. The dose is one teaspoonful, night and morning.

### *Syrup of Ipecac*

This is the best medicine we have for croup. It is used to cause vomiting. It may also be used if a child has eaten anything that is indigestible and it is desired to produce vomiting in order to empty the stomach of its contents. For this type of indigestion, one dose of a half-teaspoonful is usually sufficient. If syrup of ipecac is not available, vomiting may be induced by placing one-quarter teaspoonful of mustard or one teaspoonful of salt in a glass of lukewarm water and forcing the child to

drink it. The doses of syrup of ipecac for use in cases of croup are as follows:

### *Doses of Syrup of Ipecac*

Under 6 months, 15 drops every 10 to 15 minutes.

6 to 12 months,  $\frac{1}{2}$  to 1 teaspoonful, repeated at 15 to 30 minute intervals.

1 to 5 years, 1 teaspoonful at  $\frac{1}{2}$  hour intervals.

5 to 10 years, 1 teaspoonful at 15 minute intervals.

Unless so ordered by the doctor, not more than three teaspoonsfuls should be given.

### *Brown Mixture*

This is an excellent cough mixture but should not be used for too long a period of time, as it contains a small amount of paregoric. It is excellent, however, for use in ordinary colds.

### *Doses of Brown Mixture*

Under one year, 10 drops.

1 to 2 years, 15 to 25 drops.

3 to 5 years, 30 to 40 drops.

5 years and over, one teaspoonful.

These doses should be given every three hours.

### *Rhubarb and Soda Mixture*

This is one of the best remedies that can be prescribed for the slight digestive disturbances so often encountered in childhood. It is best used in liquid form and may be bought already prepared at any drugstore. Its use corrects slight attacks of indigestion and controls the formation of gas in the stomach. It

has a slight laxative effect and may be used in mild cases of constipation.

*Doses of Rhubarb and Soda Mixture*

Up to 1 year,  $\frac{1}{2}$  teaspoonful.

1 to 5 years, one teaspoonful.

The doses noted above should be given after each meal, and again at night.

*Compound Licorice Powder*

This is one of the best mild cathartics that can be given to children. Its use is not advised until a child is about three years old.

Up to five years of age, the dose is one teaspoonful, which should be mixed with sufficient water to form a thin paste, then added to one-third glassful of cold water. It should be given just before bedtime.

## GLOSSARY

### *Anus*

Lower termination of the rectum. The opening through which the fecal matter is discharged from the body.

### *Adhesions*

An abnormal joining of one part of the body to another.

### *Adhesive Plaster*

Cloth which has been impregnated with some substance of a sticky character so that, when applied to the skin, it will adhere closely.

### *Adolescence*

The period of life between puberty and maturity, from about fourteen to twenty-five years in men and twelve to twenty-one in women.

### *Anemic*

Deficient in haemoglobin or iron which normally is found in the corpuscles or cells of the blood.

### *Bacteria*

Germs. Bacteria are of many types, each usually associated with some special disease, such as the bacteria of typhoid, the bacteria of diphtheria, etc. Many bacteria are entirely harmless and need be noticed only when they occur in larger numbers than thirty thousand per cubic centimeter of milk. The bacteria which cause disease usually are known as "toxic bacteria."

### *Bladder*

The organ which holds the urine from the time it leaves the kidneys until it passes from the body. A thin sac in the front part of the pelvis, just in front of the uterus.

### *Cilia*

Fine, hairlike processes or fine hairs such as are found in the eyelashes or inside the nostrils.

### *Contagion*

The communication of disease by immediate contact or by the transmission of bodily discharges.

### *Contagious*

Capable of being transmitted from one person to another.

## *G L O S S A R Y*

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### *Ear Drum*

A membrane of the inner ear which receives sound impressions, and from which the impression is transmitted to the brain.

### *Emotion*

Mental excitement. Arousing of the passions or sensibilities.

### *Emotional*

Pertaining to the emotions.

### *Enamel*

The white, compact and very hard substance that covers and protects the substance of the teeth.

### *Environment*

The external surroundings and influences of life.

### *Eruption*

Rash. A visible lesion of the skin, due to disease, and marked by redness, prominence, or both.

### *Forceps*

An instrument with two blades and handles for pulling, grasping or compressing.

### *Foreskin*

The prepuce. The fold of skin that covers the glans or end of the penis in the boy.

### *Fracture*

The breaking of a part, especially a bone.

### *Function*

The special, normal or proper action of any part or organ.

### *Genital Organs*

The organs of generation or reproduction.

### *Genitals*

#### *Genital Region*

That part of the body which contains the genital organs. That part of the body where the genital organs are situated.

### *Germs*

See *bacteria*.

## *G L O S S A R Y*

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### *Glands*

Organs whose function is to secrete or secure some particular fluid from the blood.

### *Hypertrophied*

Enlargement or overgrowth of an organ or part.

### *Ice-Bag*

A bag, made of waterproof material, filled with ice. To be applied to any part of the body.

### *Idiosyncrasy*

A habit or quality of body or mind peculiar to any individual.

### *Immune*

Protected against any particular disease.

### *Immunity*

Condition of being immune or protected against any particular disease. May be natural, i. e. pertaining to the individual, or may be acquired by inoculation.

### *Infection*

The communication of disease from one person to another. This may be done through body discharges, through immediate personal contact or the implantation of disease from without, such as infection through the air by means of dust particles carrying infection.

### *Inoculation*

Injection into the body of a serum or other substance to prevent or cure disease.

### *Intestines*

The membranous tube that extends from the stomach to the rectum.

### *Intestinal*

Pertaining to the intestines.

### *Larynx*

The organ of voice. The upper part of the trachea or windpipe.

### *Lesion*

Any hurt, wound or local degeneration.

## G L O S S A R Y

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### *Malnutrition*

Undernourishment. A condition of the body characterized by underweight, poorly developed muscles, pallor, anemia, bodily fatigue and lack of bodily resistance to disease. May be caused by the presence of physical defects, insanitary surroundings, lack of proper hygienic living conditions, over-excitement, wrong kind of feeding, irregular feeding or underfeeding.

### *Massage*

Scientific rubbing and manipulation of the body to strengthen the tissues and restore tone generally. Acts as a mild exercise for the patient. The movements are from the extremities toward the heart, and consist of kneading, beating, rolling and rubbing movements.

### *Mucous Membrane*

Lining of the cavities of the body which connect with the external air, as the nose, mouth, etc.

### *Nasal Passages*

The nostrils. The openings of the nose, extending back to the pharynx.

### *Neurasthenia*

Nervous prostration. Depression due to the exhaustion of nervous energy. A name for a group of symptoms resulting from some functional disorder of the nervous system, with severe depression of the vital forces.

### *Occlusion*

The act of closing or state of being closed.

### *Oral*

Pertaining to the mouth.

### *Pharynx*

The cavity in the upper and back part of the throat which is between the mouth, the nose and the oesophagus or tube leading to the stomach.

### *Predisposition*

State of the body rendering it especially liable to certain diseases.

### *Protective Dressing*

Any dressing that affords protection to any part of the body. A dressing which covers a wound, affording protection to the injured part.

*Pus*

Matter given off from an open sore. The cream-like fluid found in abscesses, due to breaking down of the tissues.

*Rash*

See *eruption*.

*Rectum*

The lower end of the large intestine, terminating in the anus.

*Tonsils*

Two oval bodies, one on either side of the throat, at the opening of the pharynx.

*Tourniquet*

A bandage or instrument, used to exert pressure on an artery and so arrest bleeding.

*Undernourishment*

See *malnutrition*.

*Urine*

The fluid secreted by the kidneys.

*Ventilation*

The supply of fresh air to any enclosed space, as a room.

*Vitality*

The principle of life.

*Vital*

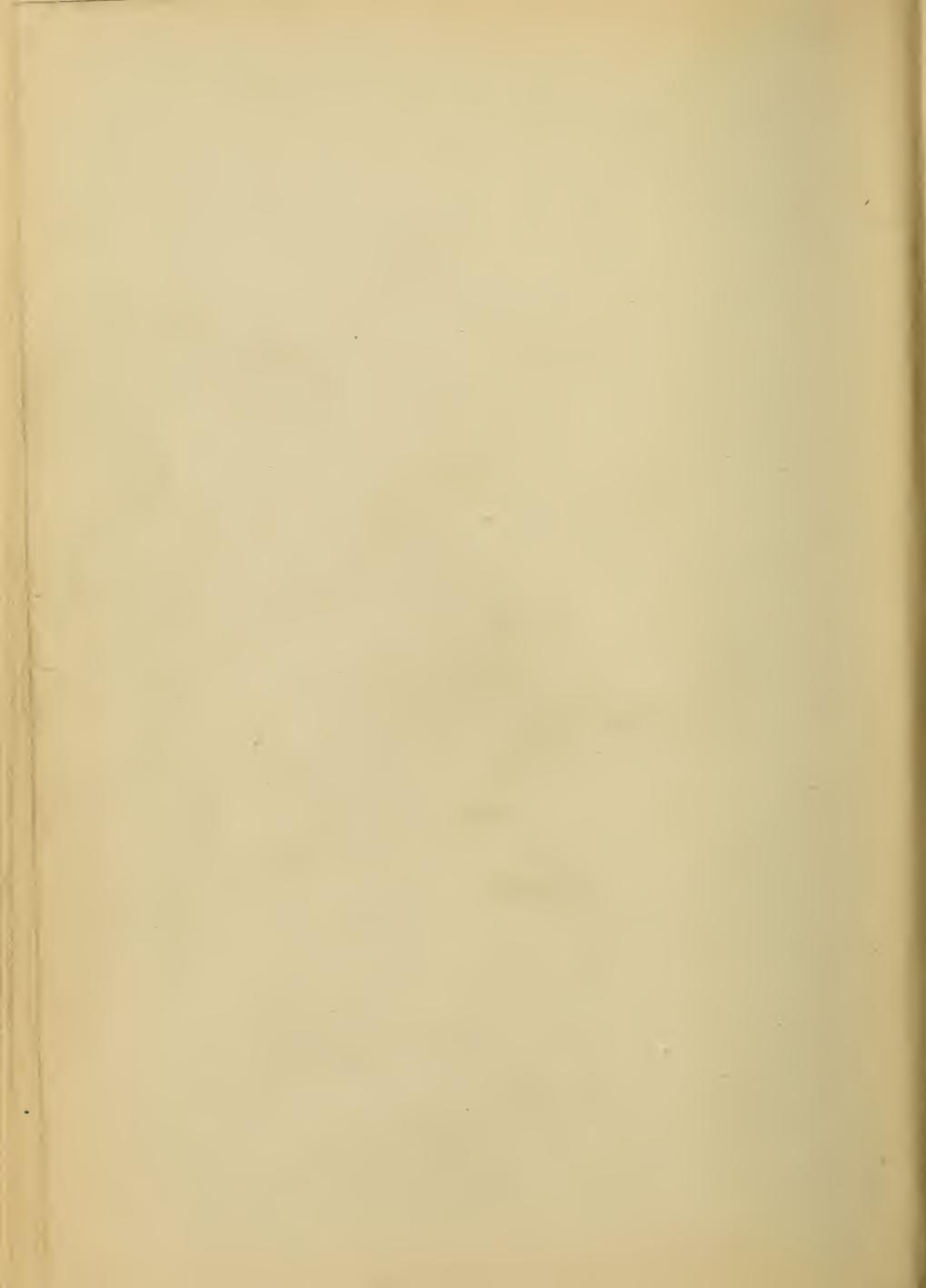
Essential to life; pertaining to life.

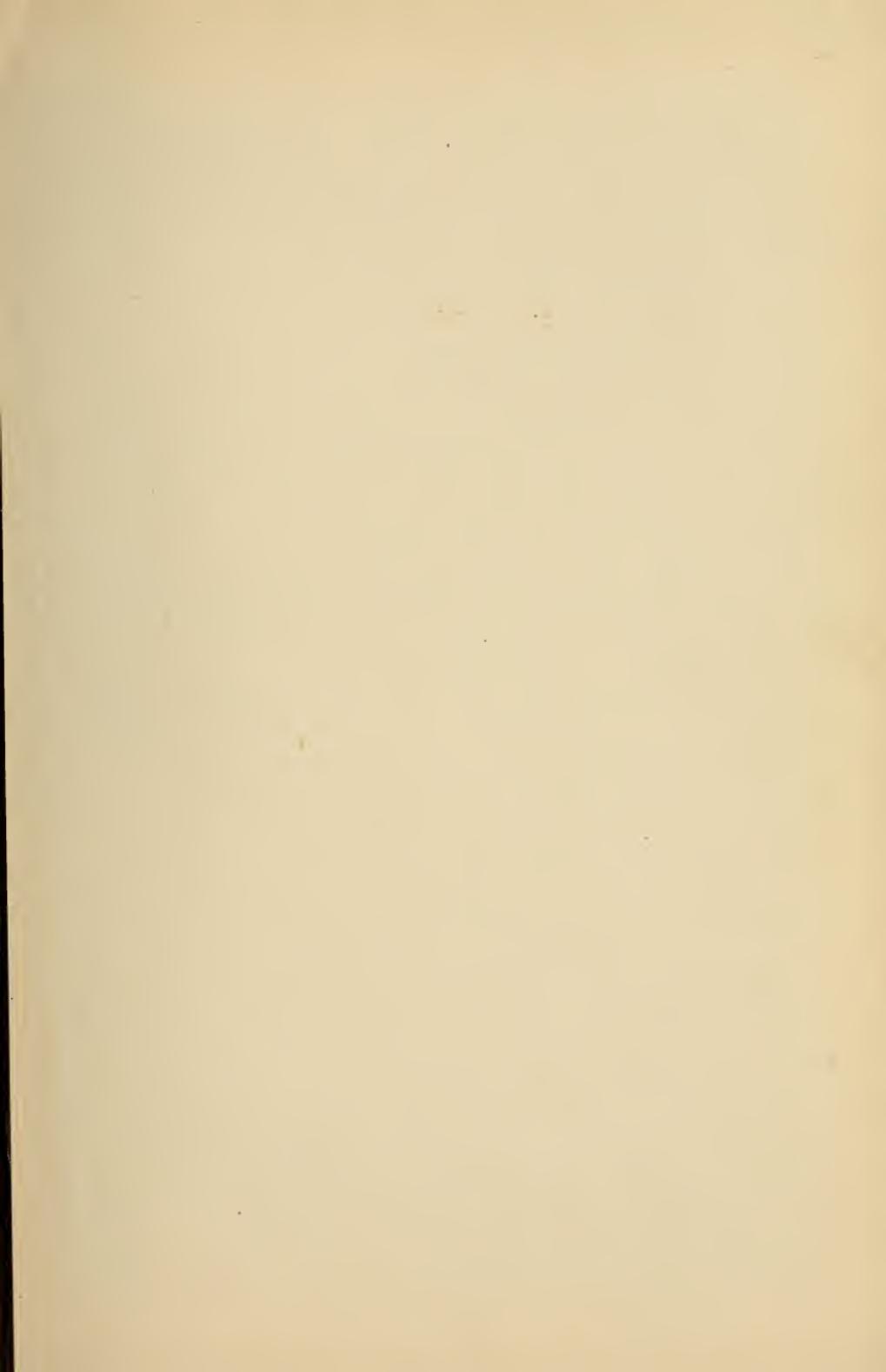




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